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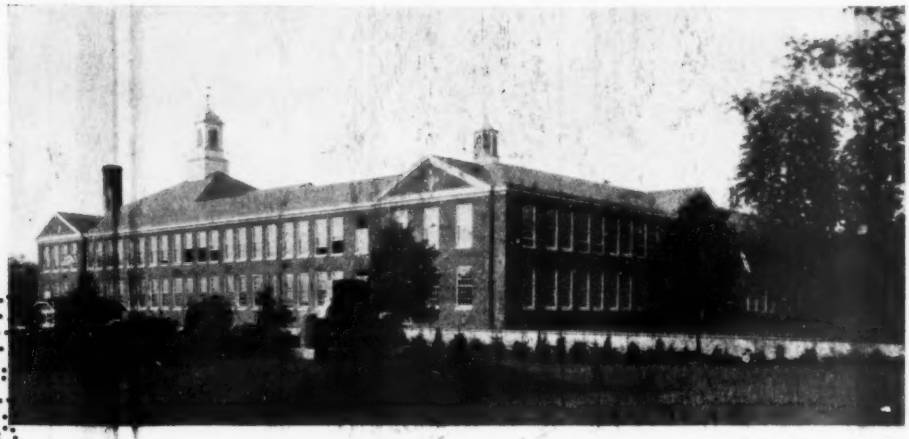

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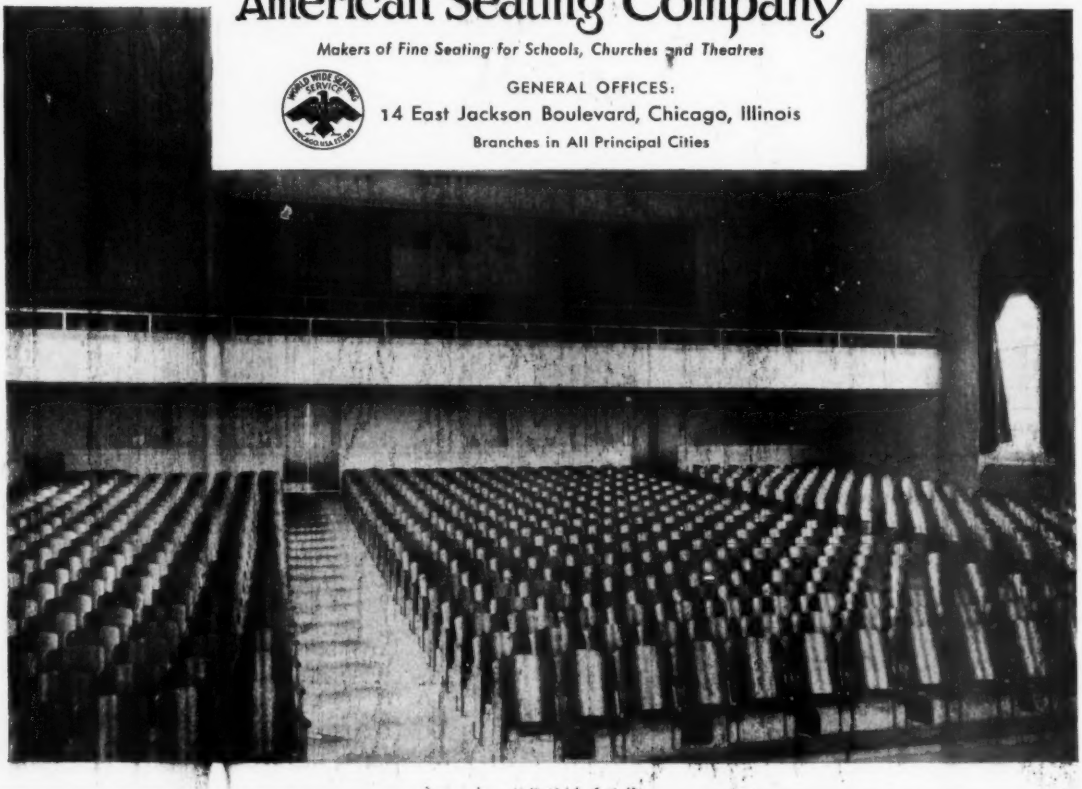

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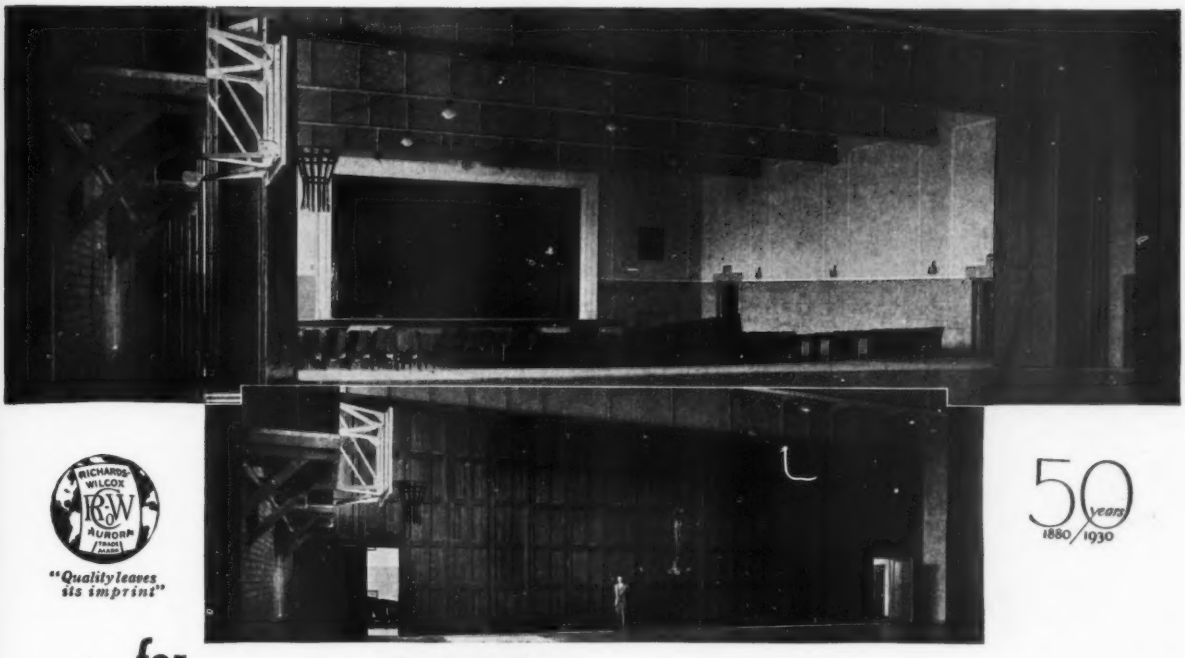

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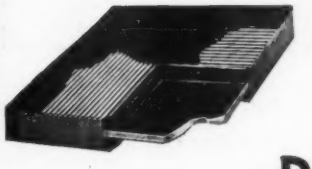

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Illustration shows work under construction on the hotel "The New Yorker", located on 8th Avenue, 34th to 35th Streets, New York City, which has been recently completed. Sugerman & Berger, Architects, Lange & Noska, Engineers.
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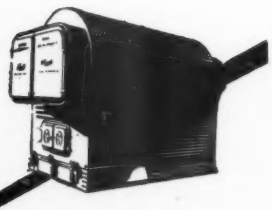

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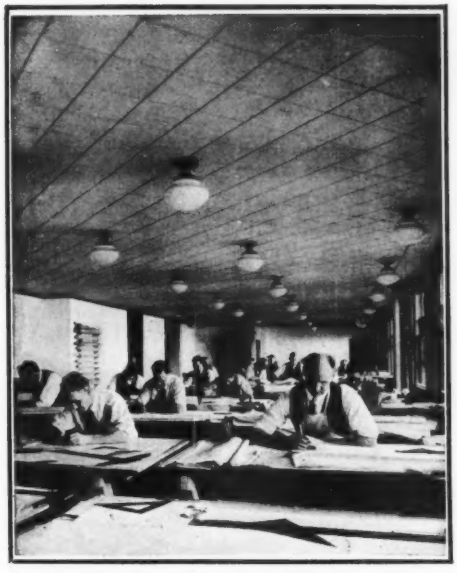

The drafting room of Ellerbe & Co., Architects and Engineers, St. Paul, Minn. The new Insulite Acoustile was applied over the entire ceiling by Hauenstein & Burmeister, Acoustile Contractors.

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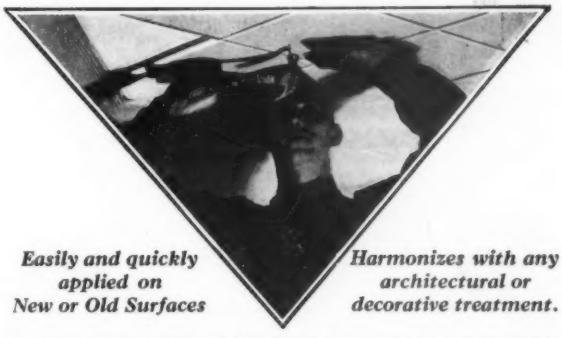

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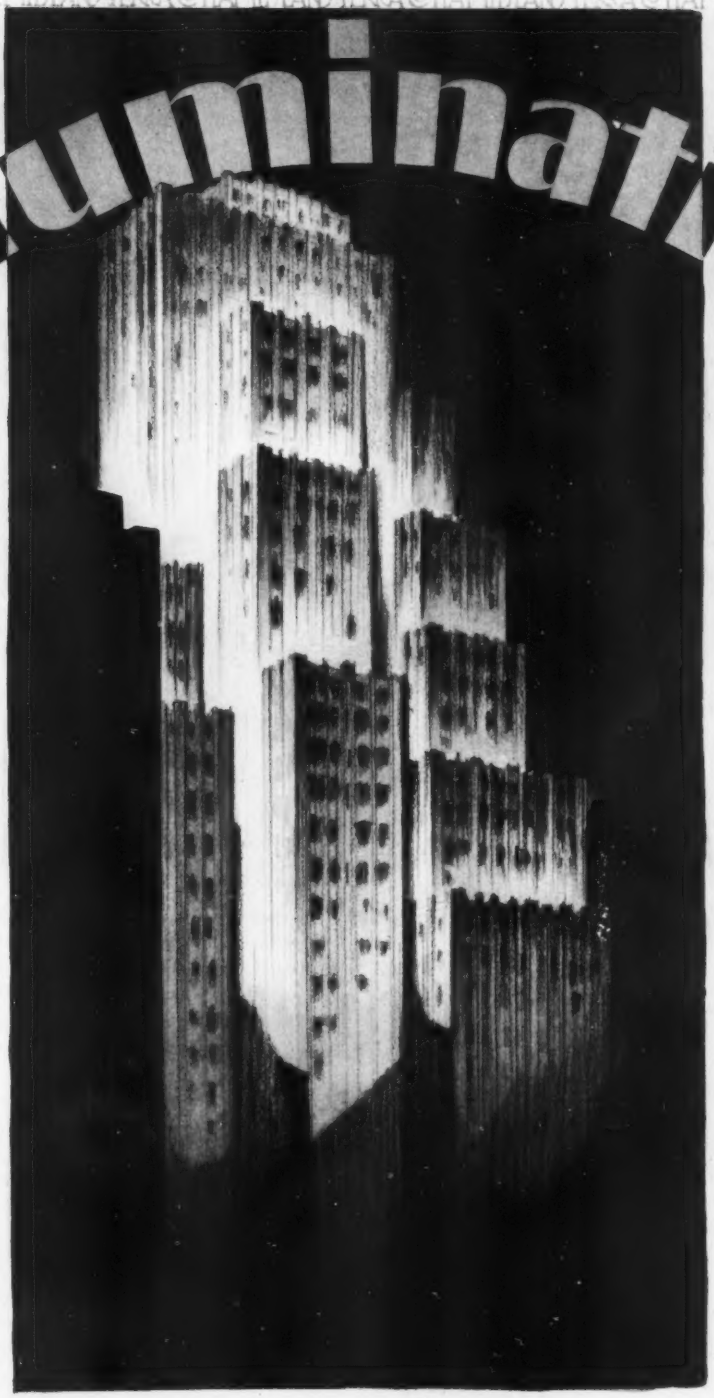

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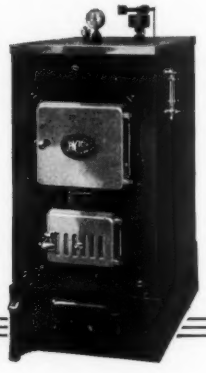

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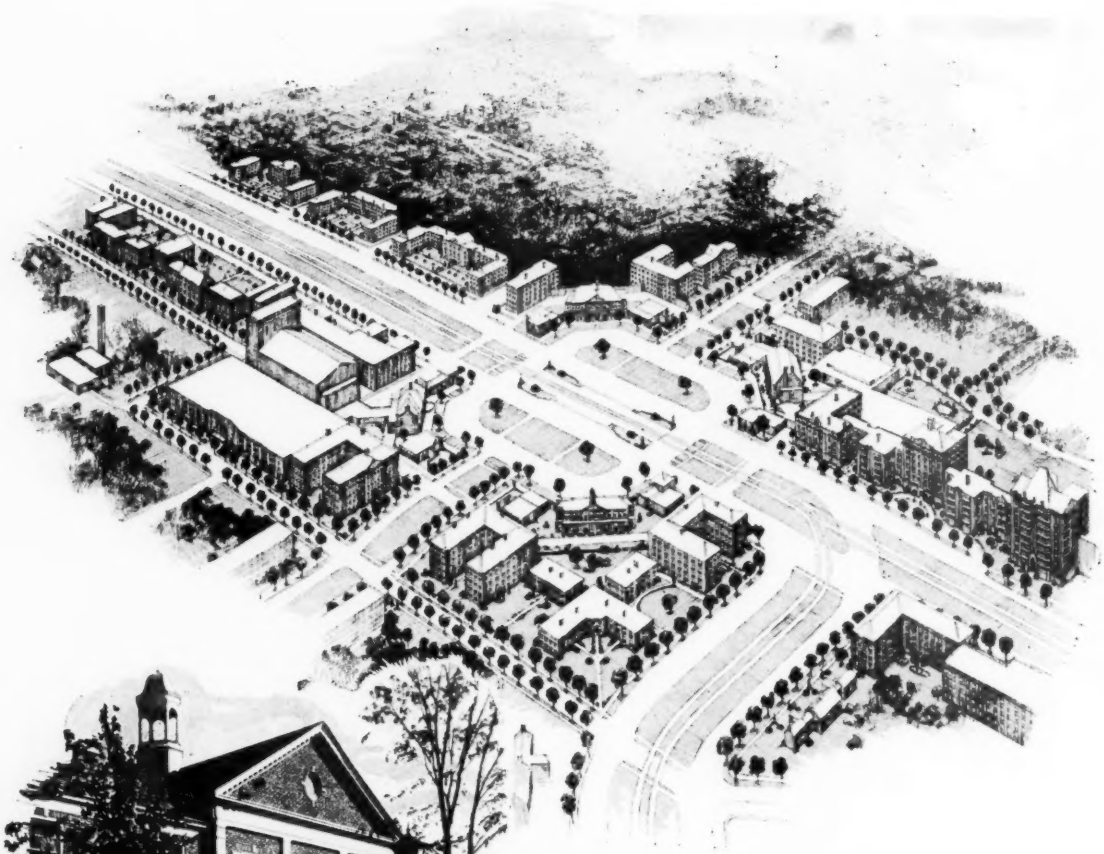

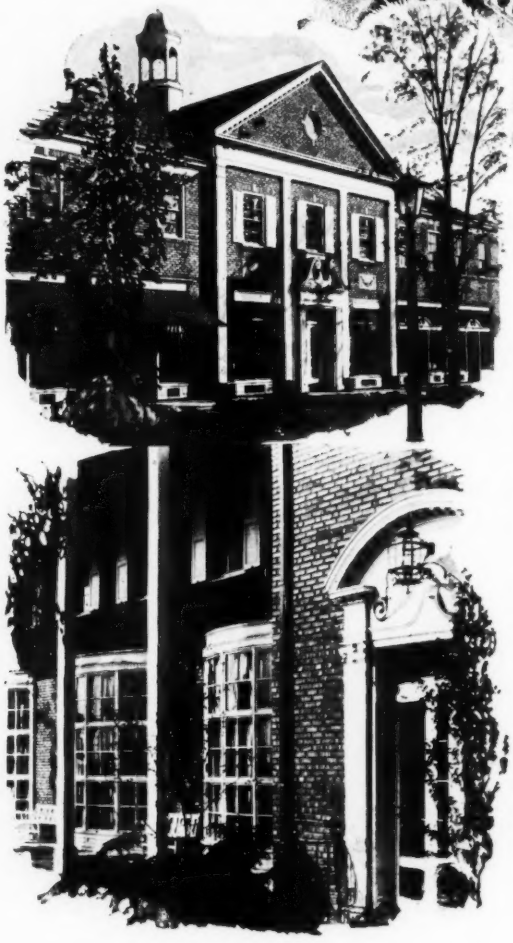

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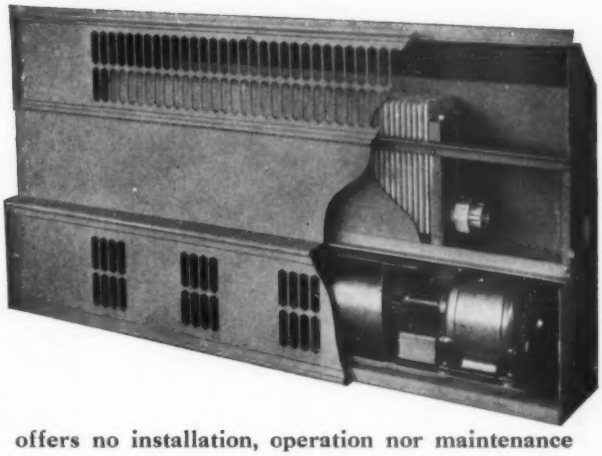

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Volume CXXXVIII
Number 2585

The AMERICAN ARCHITECT

JULY
1930

FOUNDED 1876

The Cover

IN THE CANTABRIAN Mountains of Northwest Spain, about fifteen miles south of the Bay of Biscay, lies the small town of Potes. Here, in the picturesque and sunny atmosphere so typical of the region, is situated the house that forms the subject of this month's cover.

G. Evans Mitchell, the artist, is a member of the architectural firm of Warner & Mitchell, Cleveland, Ohio. This firm designed the new Cleveland Heights High School, the Seminary of Our Lady of the Lake at Cleveland, St. Thomas Hospital at Akron, several buildings for the University of Kentucky, and is now doing the Cuyahoga County Jail and Criminal Court Building, Cleveland.

Mr. Mitchell pursued his studies at Carnegie Tech., the Art Students League of New York City, Atliers Hornbostel in New York, Laloux and Wadeus in Paris.

Next Month

PUBLICITY—How Rochester architects are using paid advertising and why the Tennessee Chapter is going to spend ten thousand dollars.

ECONOMICS—Studies showing why the Stott Building, Detroit, was built its present size.

STAINLESS ALLOYS—Recent developments which have made steel a decorative material.

BENJAMIN FRANKLIN BETTS, A.I.A., *Editor*
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BETHLEHEM

If the Architect must employ SALESMEN...

By Benjamin F. Betts, A.I.A.

SELLING ARCHITECTURE to the public and selling architectural service to a client are two different things. The public needs to be sold on the value of good architecture and how good architecture may be obtained. Clients also must often be sold upon the employment of a particular architect. The manner of contacting with and "selling" a client is accomplished through several different methods. Among these there appears to be a growing tendency to employ high pressure type salesmen.

These salesmen usually operate as scouts who travel about following up leads on proposed buildings. They make the first contact with the client to secure the commission. Whether, in the architectural profession, the high pressure salesman is undesirable or not depends largely upon his individual characteristics and the course of procedure he uses in securing commissions.

FUNDAMENTALLY there can be no serious objection to an architect engaging a representative to contact with prospective clients any more than there is to an architect doing this in person. Business must be secured and few architects are so situated that they do not need to seek commissions. One frequently hears of architects complaining that they are experiencing difficulty in obtaining large work because of the activities of another architect's salesman and it is claimed that many of these salesmen have no regard for the ethics of the profession or of good business practices.

In one case it is stated that the salesman continued his activity even after he was advised that another architect had been given the commission and had started his drawings. When advised of this and the ethics of the situation, he is reported to have said that he was concerned with getting business and not with ethics. The question arises as to whether the architect who employed this salesman sanctioned the contact man's modus operandi, or whether he was even aware of how his agent went about his duties. Architects who employ sales agents should be familiar with their methods of selling architectural service. They should insist upon their agents following the same ethical standards that the principal would follow. They should make sure that the agent is following instructions and not just getting jobs at any cost.

IF high pressure salesmen are essential to the selling of architectural service, architects employing them should see that they are made aware of and impressed with the importance of proceeding along ethical lines. It is unfortunate that it should be necessary to have a printed code of ethics, for such codes are merely another way of expressing the Golden Rule. They mean good sportsmanship, fair play, justice, and the according to others of the same rights that individuals hold to be theirs.

Modernism . . . Publicity

Officers and Board of Directors of the American Institute of Architects, 1930-1931

. . . Top Row: Fred F. Wilson, Max H. Furbringer, Edward C. Kemper, Frederick W. Garber, William M. McIntosh . . . Second Row: Charles Ingham, Louis La Beaume, Charles D. Maginnis, Franklin O. Adams, Charles Butler . . . Bottom Row: Frank Baldwin, Ernest J. Russell, Robert D. Kohn, Horace Peaslee, Edwin Bergstrom

By

Benjamin F. Betts

A. I. A.

THE program of the sixty-third convention of the American Institute of Architects was arranged to provide an opportunity for the discussion of a number of matters that the Board of Directors considered of importance to the Institute and to the welfare of the architectural profession. A symposium on contemporary architecture, a discussion of architectural publicity, consideration of architectural education, and the report of the Board of Directors were the outstanding features of the convention program.

A discussion of the development of the Octagon property was again given its share of attention. Social events included a joint luncheon of the American Institute of Architects and the Producers' Council and the annual dinner of the Institute. As a fitting conclusion to the convention all delegates and guests who were able to do so remained in Washington an extra day to enjoy a trip and outing to Fredericksburg, Virginia.

The convention was opened on Wednesday, May twenty-first, in the auditorium of the Mayflower Hotel, C. Herrick Hammond, President of the Institute, presiding. The President in his annual address stressed the effort that is being made by the Institute to bring to the people of the United States a realization of the significance of the proper development of the city of Washington and its environs; the importance of the passage of the Capper-Cramton Bill, which provides for the purchase of land to extend the park system of the National Capital; and the passage of the Shipstead Bill, which provides

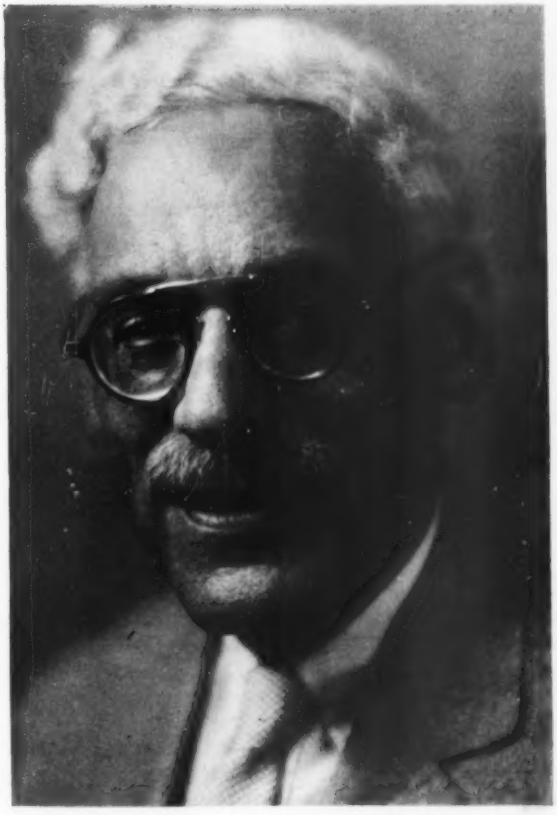
. . . Education discussed

AT SIXTY-THIRD

A. I. A.

CONVENTION

•



ROBERT D. KOHN, F.A.I.A.
President of the American Institute of Architects

Member of the firm of Robert D. Kohn, Charles Butler and Associates, New York City; president of the New York Building Congress and president of the Society of Ethical Culture

for the control by the Fine Arts Commission of private property adjacent to Federal developments.

Following the President's address the Treasurer read his annual report and President Hammond then called upon Louis La Beaume to act as moderator of the discussion on contemporary architecture. Mr. La Beaume in his usual inimitable manner conducted this part of the program with eminent and whimsical fairness to both the radicals and the conservatives.

George Howe of Philadelphia, speaking in defense of modernism, stressed the soundness, reality, simplicity and honesty of the work of the modernists, which he said is creating a new style based on old laws of architecture reformulated to meet modern needs in the light of today's economic and engineering genius. C. Howard Walker of Boston discussed the subject from the standpoint of a conservative. Admitting that he is a traditionalist, Mr. Walker decried the use, by the modernists, of such terms as function and technique as something recently discovered. He asserted that these have ever been the basis of good architecture. He stated, "It is the way you deal with function and the way you deal with technique, and the way you use it; the plus quantity is the matter for attention." Disposing of the engineering aspect of the modernists he asked whether the engineers had ever done any thing more than to support a load, span a void, or keep extraneous materials out of a hole.

John Galen Howard, when called upon by Mr. La Beaume, said, "Architecture is a language which runs back into the past and which we couldn't, if we desired, alienate from the past." From the standpoint of Harry Cunningham, if an architect is not an artist " . . . he is just another parasite and he might just as well become a reformer."

The development of architecture in Chicago and the work of Holabird and Root as an individual modern style was described and illustrated with lantern slides by Earl H. Reed, Jr., of Chicago. Ralph T. Walker of New York read a paper on the tendencies in architectural design as evidenced in recent work abroad and in the United States. Mr. Walker dwelt on the fact that the changes in design that are taking place are not so much a matter of new materials and methods of construction as that of serving the requirements of the client. Following Mr. Walker's address a paper was read by Everett V. Meeks, Dean of the Yale University School of Fine Arts. Warning against excesses in modernism and the attempting to use new forms Mr. Meeks said, "Let us not fool ourselves. A new form is not fine because it has never been used before. The chances are that for that very reason it is poor, having been tried already and discarded. A form may be fine, however, in spite of the fact that it has never been used before because it has arisen out of newer materials and methods. Not only do we need originality and invention to progress. We also need judgment and adherence to aesthetic standards." Mr. Meeks' paper was a serious, rational, well thought out approach to the subject of contemporary architecture. Due to the excellence of a paper on the same subject by Charles Killam

which was read before the Association of Collegiate Schools of Architecture on May twentieth, he was requested to read it before the convention.

Mr. La Beaume summed up the symposium by reading lines entitled, "To a pattern on a Waffle," which he wrote several years ago under the inspiration of a delectable breakfast:

What inscription cuneiform, graves your surface brown and warm,
Message mystic and inscrutable, wrought by iron mould immutable,
Does each tiny hieroglyphic spell some rapture beatific
Or proclaim some torment awful, succulent and sizzling waffle?
Toothsome, tantalizing riddle, does the geometric griddle
Hold your secret in its metal, how you'll taste and how you'll settle?
I am eager to translate you — will I grieve because I ate you?
Neither Sanskrit, Choctaw, Greek, holds a flavor more unique.
This great truth you do impart, fundamental rule of art
Meaning doesn't really matter, if there's virtue in the batter.

The symposium served to indicate that the differences between the conservatives and the traditionalists are more a matter of confusion of terms than any lack of unity as to the fundamentals of architectural design. Both are striving to meet modern needs and demands. Many of today's problems can not be solved by precedent unless this be in the nature of decorative detail. Even the term modern is confusing, for what is modern today will be history a century from now. Every age has produced its own modern or progressive group or school. Today is no exception. It is the basis of progress but it does not mean that we must discard all that the past has to offer.

An evening session of the convention was allocated to the subject of public information under the direction of the Chairman of the Committee on Public Information, William Harmon Beers. The principal speakers of the evening were F. P. Byington, President of the Producers' Council and Preston M. Nolan. Mr. Byington stated that producers of building material are interested in the advancement of the position of the architect because manufacturers are faced with a condition of price competition that is rapidly replacing quality competition. In meeting this problem, Mr. Byington said that the manufacturers must look to the architects for support and that the producers stand ready to do any thing within their power to help establish the position of the architect in the building industry and the public mind. Mr. Nolan, a well known appraiser of Chicago, emphasized the importance of architects keeping their name before the public as much as possible and in as many ways as possible.

From the discussion that followed the addresses of the evening and the reading of the report of the Committee on Public Information of the Institute, it was demonstrated that much confusion exists as to the terms advertising, paid advertising, (*Continued on page* 90)

HONORARY MEMBERS, FELLOWS, MEDALISTS, AND OFFICERS, ANNOUNCED AT THE SIXTY-THIRD CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS

Honorary Members

A. F. Brinkerhoff
Charles J. Connick
Dr. S. S. Goldwater
Dr. William A. R. Goodwin
John D. Rockefeller, Jr.

Honorary Corresponding Members

Senor Nestor Egydio de Figueiredo, Rio de Janeiro, Brazil.
Monsieur Andre Arfvidson, Paris, France.

A. I. A. Fine Arts Medals

In Sculpture,
Adolph A. Weinman

In Wood Carving,
John Kirchmayer

Fellows

E. Raymond Bossange.....New York
Otto R. Eggers.....New York
Francis Y. Joannes.....New York
Julian Clarence Levi.....New York
William Orr Ludlow.....New York
J. Otis Post.....New York
John Almy Tompkins, II.....New York
Hobart Upjohn.....New York
Arthur Brown, Jr.....San Francisco
William Charles Hays.....San Francisco
Goldwin Goldsmith.....Austin, Texas
Frederic Ellis Jackson.....Providence, R. I.
Albert C. Phelps.....Ithaca, N. Y.
Frederick William Revels.....Syracuse, N. Y.
Frank Rushmore Watson.....Philadelphia
Walter Horstmann Thomas.....Philadelphia

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AT THE ANNUAL A.I.A. CONVENTION

They Talked About Advertising

BY ERNEST EBERHARD

THE Committee on Public Information brought in a report against the use of paid advertising, by which they meant newspaper or magazine advertising—not other forms of paid advertising. Some of the delegates were quite excited until they found out what the committee meant—and some of them haven't found out yet.

• The Committee on Public Information was severely criticised for reporting against the use of paid advertising without having given the delegates present the opportunity to express their thoughts in open meeting. Its was felt that this action made it impossible to accomplish the delegates' wishes, and it was freely said that if a vote of those present had been taken the Institute would certainly have gone on record as favoring paid advertising.

• An open discussion about publicity in an A. I. A. convention would have been unthinkable five years ago, according to one of those with his ear close to the ground. He predicted the possibility of paid advertising by the Institute and individual architects within the next ten years.

• Radical delegates should have been more forward in expressing the wishes of their chapters. How can the convention as a whole judge sentiment if delegates with something to say do not get up on their feet and say it? Their cause this year might have been hopeless, as they felt, but their activity might well have made the story a different one next year.

• When architects talk about advertising they should make it a point to use standard advertising terms. As it was, there was considerable discussion at the convention where the disputants all meant the same thing—but did not know it. Paid advertising is any form of advertising that is paid for: newspaper space, magazine space, letters, posters, circulars, blotters and what have you. When talking about newspaper advertising or magazine advertising, it should be called that and not "paid advertising."

• Incidentally, in the language of advertising, there is no such term as "billboard" advertising. This term was discarded years ago. It is "outdoor" advertising, or "poster" advertising. And, incidentally, too, there is no such word as "broadcasted." It is "broadcast."

• Many an association and manufacturer has been wrecked by extensive advertising campaigns which were ill directed and lacking in intelligent handling. They form a sign post which the Committee on Public Information has done well to consider. Architects are so young in the business of advertising that there is grave danger of their going wrong since they have no precedent to guide them. Group advertising now being by individual chapters or architectural societies will help to establish those precedents and enable the Institute to proceed on a sounder basis by knowing what advertising already done has or has not been successful.

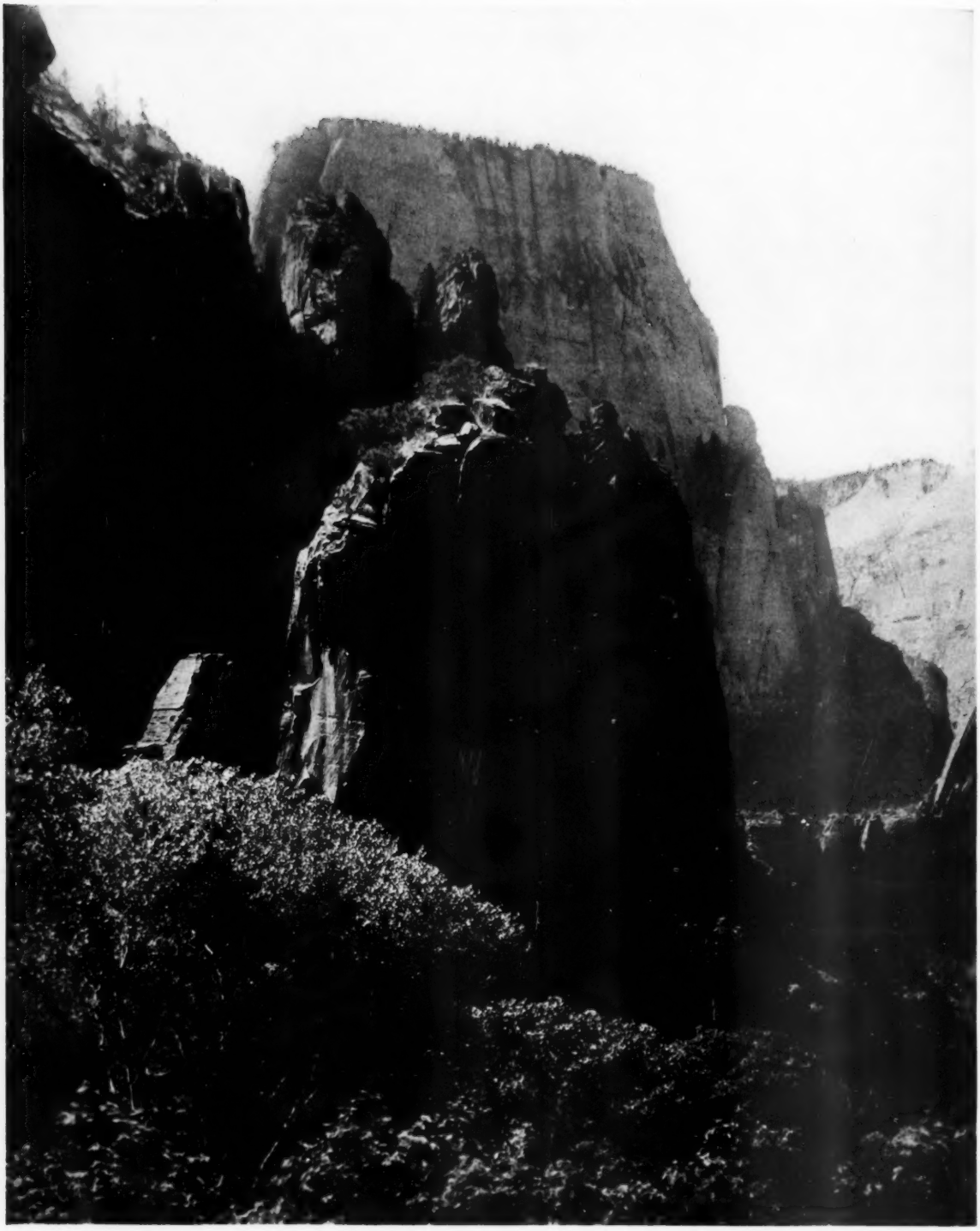
• The Committee on Public Information has done a good job with the resources at its command. But it has not gone far enough. Yet it has gone further than Institute inertia and complacence would lead one to expect. As the need for its greater activity becomes apparent, it is logical to expect that greater activity will result.

• One delegate said, "Our chapter used paid advertising for two years and we wasted our money. In one year we spent fifteen hundred dollars and, gentlemen, we did not spend it in small amounts!" Which is like saying, "We built a forty room house for fifteen hundred dollars and, gentlemen, we did not economize on quality!"

• Advertising campaigns cost money. Fifteen hundred dollars is not enough to make a dent in a market. Why, even the smaller specialty shops each spend more than that in a year. The Tennessee Chapter proposes to spend a minimum of ten thousand dollars and has engaged an advertising agency. That is not much money, but it is quite enough to make a fair start if it is intelligently spent.

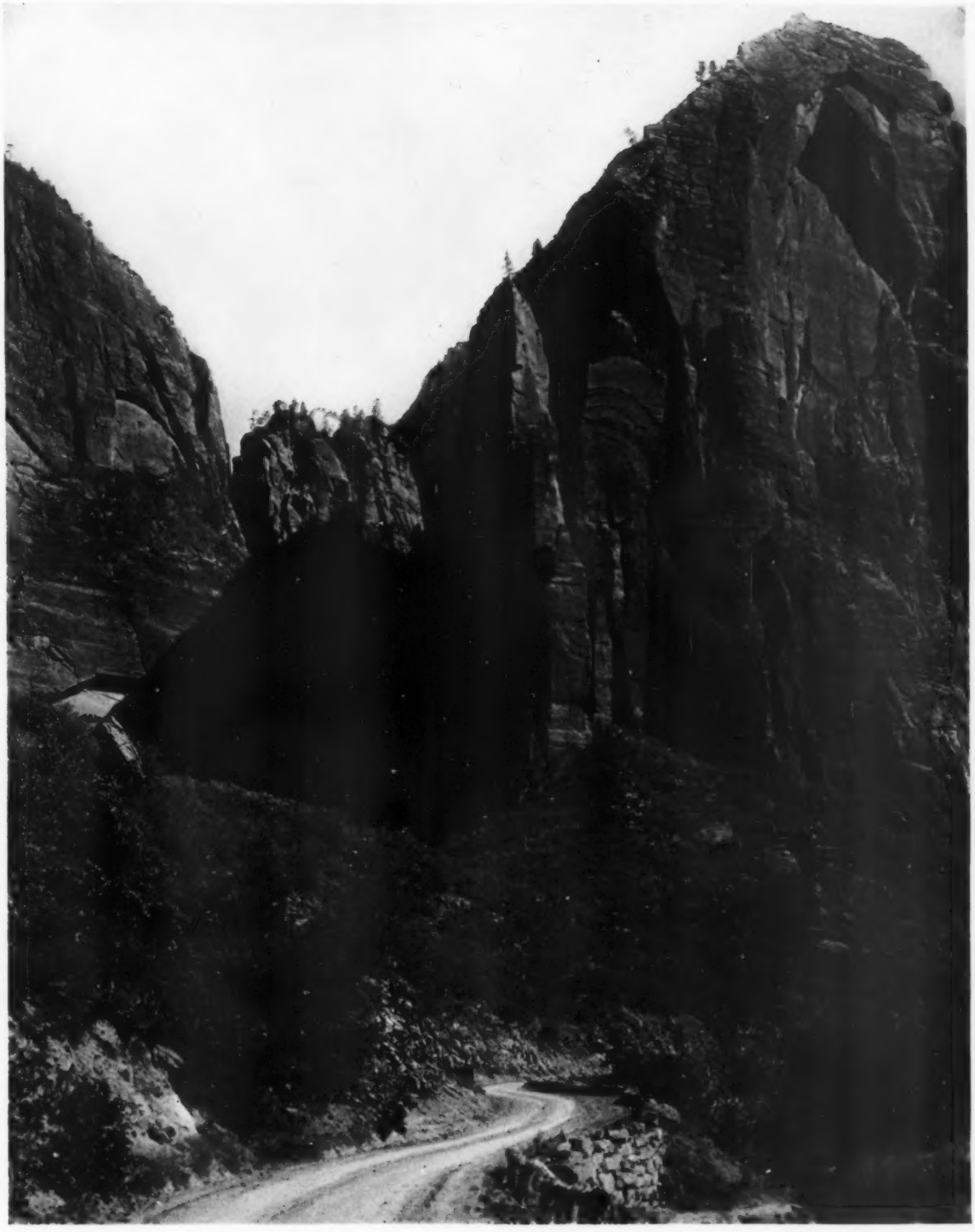
• If the Institute ever does advertise, its initial expenditure should be one hundred thousand dollars at the very least, requiring $25 each from four thousand architects. This amount would just about comfortably cover a campaign in a few of the leading popular building or industrial publications such as Home & Field, House & Garden, House Beautiful, Country Life in America, or Nation's Business. A page in House & Garden, each issue for a year, for instance, would cost $15,120 for the space alone, this figure not including engravings and art work.

• When automobiles are advertised, the number of automobiles sold is increased. Every such advertisement helps other sellers by making more people want to own an automobile. That is economic advertising. But when tires are advertised, the only way a manufacturer can get business is by taking it from a competitor; the market is fixed by the number of cars sold and no amount of tire advertising will increase the total number sold. That is uneconomic advertising (*Cont'd. on p.* 94)



SKYSCRAPERS

Colorful and overpowering in mass, walls of rock rise gracefully toward heaven. The inspiring majesty of natural forms found in Zion Canyon, Utah, have been captured in this photograph from the collection of John Kabel



CATHEDRAL

John Kabel travels throughout the United States, photographing at his leisure the beauties and grandeur of nature. This photograph, suggesting in mass a cathedral at the base of a mountain, was taken in Zion Canyon, Utah

OUR NEW LIVING CONDITIONS DEMAND A

New Type of Building

By FRANK P. CARTWRIGHT
Chief Engineer, National Lumber Manufacturers' Association

THE urban building of the future is foreshadowed for us now—but he that would peer into that future must think in social terms as well as structural. For many generations we have lived in two dimensions. All our social arrangements are expressed in length and breadth; our habits of thought are predicated on movement in horizontal planes.

Despite their increasing heights, present day buildings reflect the same conception. One sleeps here, works there; eats yonder; plays somewhere else—and spends half his free time going to and fro.

A part of all this traveling is unavoidable, desirable, even pleasant. But most of the time thus spent is fatiguing, boring and even unpleasant or dangerous. Indications are definite that for certain classes of people the building of the future will make daily travel a matter of choice rather than necessity.

Why will this building surely come? Why is it so urgently required? The answer is that life is short. We can get more money, more food, more beauty, more laughter—but not a second more than fate has allotted us to enjoy these privileges. For those who work, there are but two or three hours from the twenty-four, three or four at most, to follow their own fancies. Who adds an hour to his three of freedom has gained a year in three. For generations travel has been accelerating, and distances increasing. In half an hour your father walked leisurely a mile to his place of business; you ride the rails twenty miles in an equal time; your son, if he follows the trend, may fly to work as quickly from some bourne a hundred miles away.

But will he? It is more logical, it is easier, it is saner to keep the speed and shorten the distance. That extra hour of freedom, the extra years of life lie just beyond our reach; just below the paper on the draftsman's board; barely shining through.

How can the architect meet our need? He can plan for us buildings for life in three dimensions instead of two; give us homes in the clouds; put our places of business below them, not twenty miles away; fill in underneath these with the services and utilities for which we spend our time and energy seeking along the streets; in brief, make part of our travel vertical.

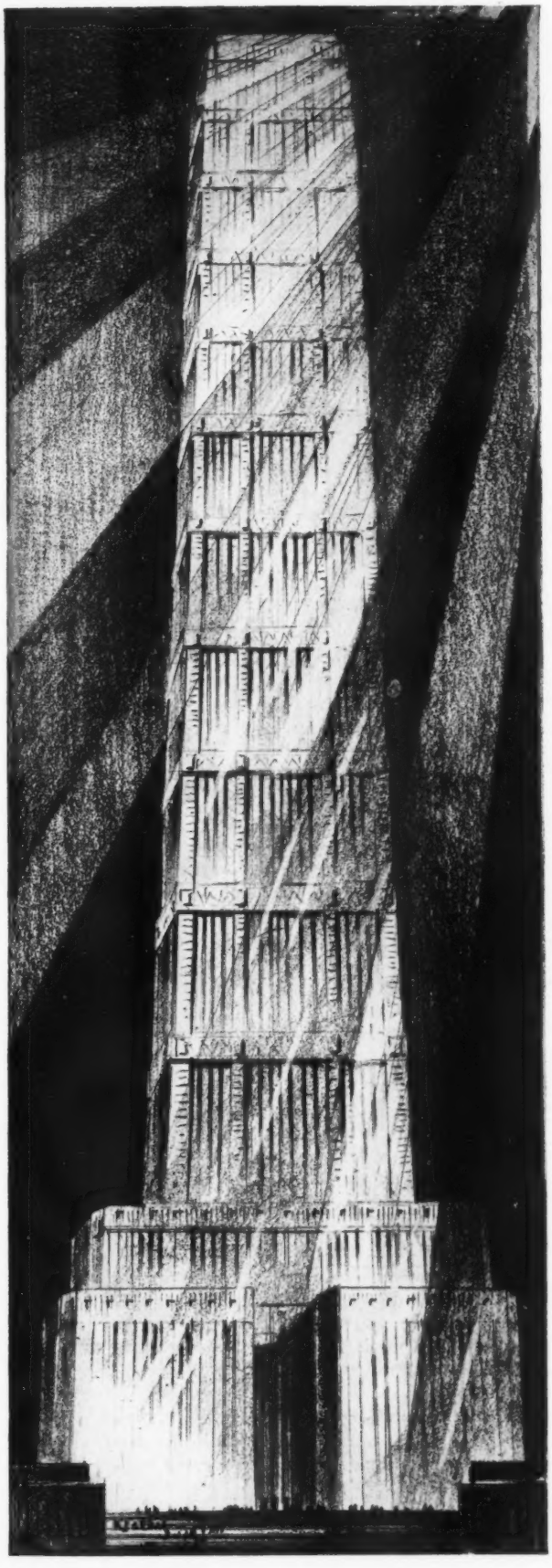
Who will give us such a building? The tools for its erection are forged and tested. The social adaptations necessary to make its occupancy successful have been experienced in full by a few; in degree by many. New

This is the fourth of the "We Need New Materials" articles, inspired by that of Harold Sleeper, published in the March issue. Another will be published next month. Since Mr. Cartwright's article was received, the editors have read the announcement of a forty-seven-story building planned for Philadelphia which combines garage, offices and apartments in the one structure. Too, the idea of a suspended building is actually being worked out in another way for the Chicago World's Fair

materials are in the making, but the familiar ones will serve. The needed accumulations of capital and the financial organization are available. Which of our aspiring cities numbers spirits bold enough to weld these elements into the buildings of the future; buildings that will, at their occupants' demand, provide all the accessories of existence; that will build life in three dimensions instead of two.

How superpose residential occupancy on business districts already multi-storied? Will not the result clog streets already brimful? Superpose is exactly the word, and if that is done half the present congestion will disappear. When is it we are jostled and crowded in cars and on corners? It's at morning, at noon and at night. We are going to work, to lunch, to our homes. If part of us go up instead of away, will the crowd on the streets be thicker?

Buildings of the future, then, to meet spatial and economic requirements in the cities where they are most needed must be of tremendous height and size, perhaps twice the limits so far reached. Their designers must make bold departures from present urban building practice, and they must be freed from hampering, obsolete building regulations so that they may make the most of their knowledge. This done, the two thousand foot mark



LIVE
in the upper stories
WORK
in the lower stories

will be no harder to reach than the one thousand foot mark is now.

Visualize a few of the things that could be done. What limits our present efforts? Not floors. One floor is like another if it is six, six hundred, or six thousand feet above grade. Not walls. As long as the mills can twist steel strands, we can hoist stone or brick and anchor it in place. It is the columns. "The columns will eat up the floor space." "The shapes are hard to roll." "The columns won't carry the load."

TWO answers to all that. Cut down the load and put the columns outside the building. They have nearly crawled outside on a few buildings lately, but no one really caught them at it. First of all, the job will be a setback, a type that sprang from groping man-made laws but is as sound and natural as the taper of a tree bole. Down where elevators must be numerous, hall and lobbies wide, service space commodious, it spreads out to hide these light shunning activities in its vitals. Up where light and air are essential it narrows down till every foot of floor space receives them.

Why fill that priceless sunlit space with a forest of great columns? The tree has one stem, not a dozen or a hundred. Why not a row of columns around the building, linked across the structure at ten or twenty-story intervals with a system of husky bridge trusses that can carry the space between it and the system above as an independent structural unit? Columns within (*Continued on page* 86)

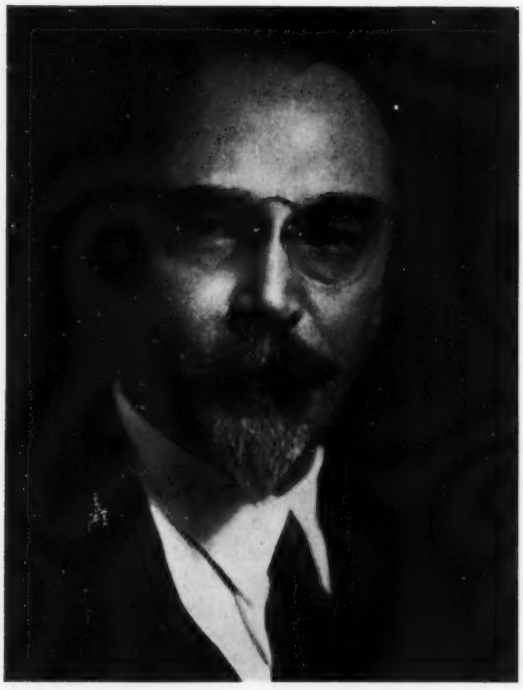
How Francis Keally would design the building described by Frank P. Cartwright

BASE
of concrete

TOWER
of glass, steel and aluminum

COLUMNS
carried outside around the building

TRUSSES
suspended from columns carry 10 to 20 floors



EVERY AGE creates its own MODERN ARCHITECTURE

By
W. K. Oltar-Jevsky
A.I.A.

"MODERNISM" has become a favorite and inexhaustible theme for the exchange of opinions. The subject even attracts the attention of the general press, and the circles of admirers of modernism are steadily growing. Modernism is asserting itself and proving its right of existence and recognition. The more enthusiastic worshippers of modernism ascribe to it a tremendous part in the cultural movement of humankind, claiming that modernism in architecture is an unprecedented departure in the history of the development of architectural form. It is therefore easily understood that we, the contemporaries of modernism, take pride in claiming a certain amount of responsibility for the creations of this brilliant era.

Unfortunately, we can ascribe to ourselves that personal part in the shaping of modernism only at the cost of ignoring certain data of previous achievements in the development of architecture. Modernism—in the sense of progress in the development of form—and I do not see any other definition—is just as old as architecture itself. In the entire course of history, each consecutive architectural form must have appeared as "modernistic" from the standpoint of the previous one, and, as is usual with novelties, must have called forth, deservingly or otherwise, great interest and even sometimes, enthusiasm. Such was the case of the Italian Renaissance, which exhibited the forms of ancient Rome, modernized and adapted to new requirements of the life of the period. Such was again the case of the brilliant and elaborate Baroque which superceded the noble restraint of the Renaissance when the latter began to tire the jaded taste of the cinquecento, and so on, all through the course of history. All those forms were considered modernistic in their time and no doubt contemporaries then took no less pride in accepting them, than we, the contemporaries of the modernism of the twentieth century, do today.

Thus we see that modernism has always existed as a movement, sometimes abating and then flaring up again in tune with the tempo of social and religious life and the technical achievements of the times.

It should seem too early yet to try to evaluate the importance of contemporary modernism in the history of the development of architecture. It may happen that a new brilliant page of that history is being written; it may just as well happen that our descendants will see in it a decadence of architecture entailed by the preponderance of economic interests at the cost of purely artistic stimuli. And if we would compare our contemporary modernism, based practically on the same constructive features as those of ancient Greece (the beam and the column) with the transition from flat roofing to arch and the vault made in antiquity, or with the modernism of the Middle Ages, when the daring genius of the builders transformed the formerly heavy and massive volumes into light, religious skyscrapers springing heavenward,—it will still remain a question what era has proved more radical and has added more to the treasury of architectural development.

TO the modernism of the past we owe immortal creations which attract our worship even today, and its monuments draw thousands of pilgrims from all corners of the world even now. The modernism of today has been externalized in simplified forms, responsive to the practical spirit of our time, increased use of machinery, and in dimensions exceeding any precedent. The most outspoken expression of contemporary modernism is chiefly the skyscraper, which has given a new expression to architecture in form and mass, and which has added to the modern city a skyline of fairy-like shapes. On the other hand, the skyscraper basically represents not more than an endless combination of beam and column, more often than not spoiled by external architectural forms aimed to camouflage the basic soundness of construction.

When speaking of contemporary modernism I cannot help recalling an episode of my earlier years. Some

ONCE MODERN . . . *the Parthenon marked the culmination of Greek temple architecture. Its columns show a marked refinement when contrasted with those of the Temple of Poseidon in Paestum, shown below, which was thoroughly modern one hundred years earlier*

twenty-five years ago, still a student and, of course, a modernist, I went to Vienna to the workshop of Professor Otto Wagner, at that time the foremost leader of the modernistic movement in Europe, with the intention of perfecting myself in modernism. When told about the aim of my visit the eminent professor advised me to study the classics in order to comprehend the mysteries of modernism. That advice sounded to me like sarcasm and it took many years of independent research and experience to recognize the importance of the Professor Wagner's cryptic utterance.

The chief elements that create and define a style are building materials, methods of construction and social conditions. The composition of an architectural design, which is the logical outgrowth of these elements, will convey the correct solution of the problem and the complete representation of a certain style. And the more logical the expression of those elements, the higher the perfection of the building. This is a rule equally borne out by the forms of a severe, early Greek temple and by those of an ultra-modern gasoline station. Logical composition is a fundamental requirement of archi-

"Is there anything whereof it may be said: See, this is new? It hath been already of old time which was before us . . ."

Ecclesiastes 1-10

A new architecture that met the needs of its times is evident in the Colosseum. This magnificent amphitheatre utilized the idea, new in A. D. 80, of the round arch, a radical and progressive departure from the column and lintel of the earlier Greek construction

Even these buildings were once MODERN

tecture. And in order to demonstrate the value of that principle one naturally should turn to the perfect monuments of architecture i.e., to ancient Greece, where the completeness and purity of forms almost reaches an expression of the ideal.

The architectural treatment of a Greek temple discards the use of elements contradicting the skeleton of the construction—all details are literally fused with the construction itself that results in a beautifully harmonic entity. In it, building materials, methods of construction on a comparatively scanty technique, and social conditions centering around the temple find complete and clear expression.

The transition from the heavy, stocky proportions of the early Doric temple to the light and slender colonade of the Parthenon was primarily due to the growth of the technical experience of the Greek builder. That change in proportions was not the result of a change in tastes but was brought about by a better acquaintance with the laws of the resistance of materials which proved that the lightened columns would just as effectively serve the purpose of support. And only after the constructive problems had been solved did the builder turn to the solution of the aesthetic problems.

That process of the logical transmutation of the constructive principles into architectural form can be traced all through the history of architectural composition and is just as binding on contemporary modernism as in any other style. A modernism based only upon revolutionary tendencies of the architect and upon his unlimited imagination has nothing in common with the monumental art of architecture. It might at the best result in fair architectural decoration or, at its worst, be nothing but an arbitrary collection of invented forms and casual details.

A demand for new forms (*Continued on page* 100)

The Gothic arch, modern construction in the thirteenth century, made possible Cologne Cathedral, the most magnificent of all medieval cathedrals

ONE MAN GOT A JOB THIS WAY

HE had called five times with a letter of introduction—but the architect was always in conference and could not be disturbed. But this young fellow, seeking his first job as a draughtsman, was of sterner stuff than most and so he set his wits to work. The result was——

"Would you please tell Mr. Wilder that his friend Frank Blank, over in Europe now, asked me to stop in and give him a little present that came direct from the other side?" And he showed a package that gurgled a bit. The reception clerk smiled broadly and delivered the message personally.

The young fellow was quickly ushered into Wilder's office. He presented the bottle. Wilder expanded. Then the applicant presented his letter of introduction from Blank and struck the architect for a job. He got it and held it for three weeks.

. . . who has found the answer?

THIS little story is true. It is typical of the hit-or-miss methods of hiring and firing which are used by many architectural organizations.

Somewhere there is an organization that has developed a yard stick for the hiring of draughtsmen. Its turnover is low. Its men are so carefully chosen that almost every one makes good.

The AMERICAN ARCHITECT would like to have the head of such an organization—or perhaps the chief draughtsman—write an article explaining such a yard stick and how it is applied. It might explain how suitable men are located. It might cover the part played by education, experience, personality, recommendations, questionnaires, tests, and so on. It might cover anything which will help architects to select capable draughtsmen or draughtsmen to fit themselves to better serve the needs of the architect

Seventy-five dollars will be paid for each article accepted. It should be about two thousand words long and, wherever possible, relate anecdotes of actual experiences. The editors of THE AMERICAN ARCHITECT would like to receive articles on this subject by July 30.

ADVERTISEMENTS
in Mahlstedt's newspaper campaign, intended to help create a popular appreciation of the value of an architect's services

A few changes will bring new beauty and more comfort to old houses—and now is the time to have the work done.
Architects Are Not Dreamers
One often hears the expression "That looks good on paper, but is it practical?" Architecture today has passed far beyond the stage where its activities are limited to the drawing board. It is far from a matter of pretty pictures and technical lines.
The training behind a modern architect's service makes him a man of practical ideas—harmoniously expressed. He is the influence that adds the picturesque, the quaintness and the underneath quality to our cities, towns and countryside. Too many have been poorly informed as to the cost of architectural service—and many a costly error has occurred in consequence.
Look about you and you will find the things you like most in the homes of your friends are the things that only expert architectural advice could produce. And then chances are ten to one the cost was no greater than common place construction.
MAHLSTEDT'S
10 SERVICE YARDS IN WESTCHESTER—GENERAL OFFICES AT NEW ROCHELLE

Make the old home 100% serviceable. You can pay by the month—out of income.
Good Architecture Keeps Down the Cost
Rarely do you find two people whose ideas about home construction or design are the same. To give homes the demanded individual touch and yet keep the cost down has been one of the many problems successfully overcome by your modern architects.
Architecture is a very definite and necessary business. Just as the doctor diagnoses the needs of his patient and prescribes a cure, so the architect of today studies his client's needs and then sets out in an intelligent fashion to see that he gets a home that is good to look at, pleasant to live in and as full of value as can possibly be obtained.
The architect's fee is only a small fraction of the entire building cost, and invariably the resultant value from the resale standpoint and from the livability makes the fee a very profitable investment.
Talk with an architect about that new house you have been dreaming of—or about modernizing the old one. You will find him a man who can and will help you to attain your goal.
MAHLSTEDT'S
10 SERVICE YARDS IN WESTCHESTER—GENERAL OFFICES AT NEW ROCHELLE

This Material Dealer Says

"BUILD a mouse-trap that is good enough and the world will beat a path to your door," predicted Emerson in his writings a long time ago. But this business theory has grown whiskers, developed lumbago and is today completely derelict.

We all can remember when officers of the First National Bank wore an air of tolerant attention to extremely polite, if not timid, requests for accommodation. But the Trust Company around the corner and other agencies have changed the attitude of these venerable institutions. Today bankers are not content to shine the seat of their pants on the office chairs—they are shining their shoes and going out after business!

With extreme professional dignity and a seeming shyness towards those "bruising contacts of business" that are born of initiative, architects as a whole have been content with the compliment of being sought after by prospective clients. Very gratifying, no doubt, to professional pride but a rather out-of-date policy for the development of a successful business. And architecture is a business in every sense of the word. It is true that it is also one of the fine arts. But it goes far beyond this. Into its province have come law, finance, scientific research and other important factors. The emblem of a modern architect is no longer the T square and triangle.

We are told that successful architectural design comes from thinking in three dimensions. This involves the ability to properly visualize the work in plan, section and elevation. Beyond this, however, there is a fourth dimension that must be considered. We may call it the ability to make others visualize the need for a proper plan, section and elevation.

A recent survey conducted by THE AMERICAN ARCHITECT indicates that there is today a more friendly attitude toward publicity and advertising of the profession among architects in every section of the country.

You may say, "Yes, we are in favor of doing something that will create an appreciation of an architect's work and stimulate a demand for our services, but how will we do it?" Similar problems have faced many groups during the past few years as changing customs have brought changing markets. From the Citrus Fruit Growers Association to the "Save the Surface" campaign sponsored by paint manufacturers, united effort has spelled improved conditions for each particular interest.

In Westchester County, New York, one of the leading building material organizations has just sponsored a campaign that may well serve as a guide to others in

A home is your best investment. Don't put it off—put it up now!
Why an Architect?
Now and then the question is asked "Why should I spend the money for an architect?" It would seem that, to those who have lived in Westchester or who have driven through some of its beautiful residential sections, the answer would be rather obvious.
There are three main reasons why the services of an architect are desirable. They may be set down briefly as: authentic, attractive design, proper attention to construction and materials, and actual economy in total costs. These should be enough to convince any homeseeker without delving into the influence that architecture is bringing to bear in improving our communities, increasing property values and other wise making this county a delightful place for work or play
Never was the opportunity for full value in home-building greater than it is today. You will find your architect, builder and supply dealer ready to help you towards owning a home of which you can be proud and in which you will be fully satisfied.
MAHLSTEDT'S
GUARANTEED BUILDING MATERIALS, FUEL & PAINT
15 SERVICE YARDS IN WESTCHESTER—GENERAL OFFICES AT NEW ROCHELLE

An up-to-date home is your best investment—own one now.
So They Called In An Architect
Mr. and Mrs. John Black had long wanted a modern home but did not feel that they had money enough to build a new one. On the recommendation of a friend they explained their problems to an architect who lived nearby. Today you wouldn't know their old house!
This architect showed them how to take away the jig-saw ornaments, give an attractive sweep to the roof, improve the heating facilities and redecorate inside and out. And the total cost was very moderate, too.
Sometimes people do not fully realize the value of architectural advice. The experience and ability of an architect will produce a value in the completed structure many times in excess of the fee.
Talk your situation over with one of the architects whose work you have admired. You will find him eager to help you attain a truly comfortable and attractive home at the lowest cost.
MAHLSTEDT'S
GUARANTEED BUILDING MATERIALS, FUEL & PAINT
15 SERVICE YARDS IN WESTCHESTER—GENERAL OFFICES AT NEW ROCHELLE

By JAMES SERVEN

"Consult an Architect"

promoting favorable recognition of architectural services. National problems are but a multiplication of local problems, so in the local adoption and promotion of a plan there is formed a nucleus for a national movement.

Those who are familiar with the development of Westchester County know that both the visible beauty and unseen quality of its residences, stores, public buildings and other structures may be traced in a large measure to the architectural ingenuity that has planned and guided this construction. Yet here and there stock plan houses and designs of the well known "architectural monstrosity" class have found their way in and have tended to lower property values and to retard community betterment. This situation in every community means bad credit risks for building material dealers, unhealthy business for contractors and builders, and no business at all for architects.

The plan followed in Westchester is very simple but it has brought together the important local factors of the building industry towards the end that there may be more building, better building and better values.

Six leading newspapers were selected in the territory of The J. A. Mahlstedt Lumber & Coal Company, sponsors of the campaign, and the copy, as illustrated, furnished them with the first series of advertisements. These advertisements were three columns wide and twelve inches long. The series was planned so that each appears simultaneously in the various sections of the county and specified that the selected copy was to appear every Monday.

Before these advertisements appeared in the local newspapers, proofs were forwarded to all architects in the territory for their comment. Needless to say, this comment has been very favorable. The following expressions are typical:

"Such hearty co-operation will, no doubt, further recognition of the architect and create better building."

"The proofs of advertisements received in today's mail were excellent. You have our hearty good wishes and support in your program."

"I have read the various advertisements which have been running in the Westchester County newspapers in behalf of the architects, and I beg to take this opportunity of commenting on your co-operation. I think this will be of mutual benefit to the architects and to yourselves and I beg to assure you of my hearty support. I think the architects are badly in need of advertising of this sort, particularly at this time." (*Cont'd. on page* 119)

DRAWINGS AND ETCHINGS

By Prescott M. M. Jones

Louis A. Lamoreux

M. Aubrey Russell

George Fischer

La Rue du Bourg, Chartres, reproduced from a pencil drawing by Louis A. Lamoreux, A.I.A., Mansfield, Ohio. This drawing, made on white paper, was used by the author as a Christmas greeting card

BRIDGE TO BALBOA PARK, SAN DIEGO
BY M. AUBREY RUSSELL

BRIDGE AT MORET

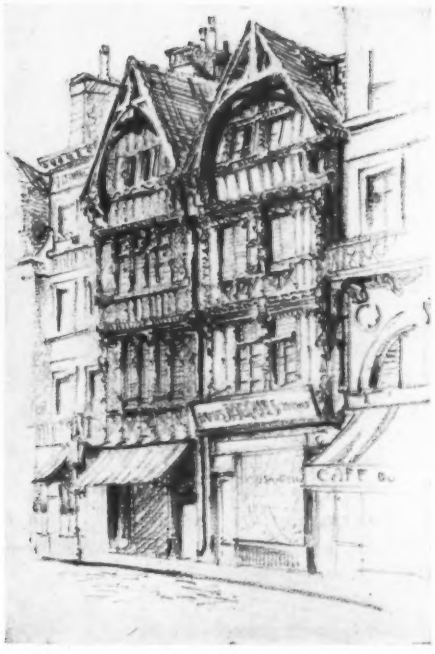
AND

THE MILL ON THE HILL

ETCHINGS

BY

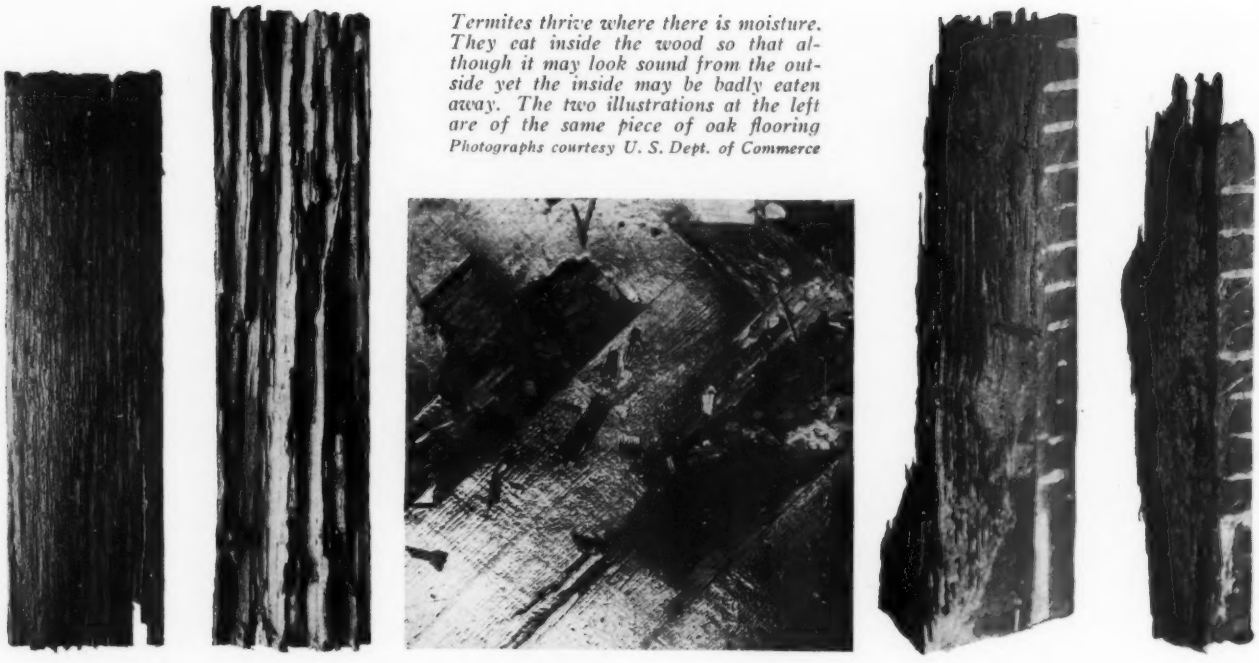
PRESCOTT M. M. JONES



A little of old Normandy in Caen, reproduced from a pencil drawing in the sketch book of George Fischer. Mr. Fischer is connected with the office of Beverly Nelson, St. Louis

ENTRANCE TO BALBOA PARK, SAN DIEGO

BY M. AUBREY RUSSELL



Termites thrive where there is moisture. They eat inside the wood so that although it may look sound from the outside yet the inside may be badly eaten away. The two illustrations at the left are of the same piece of oak flooring
Photographs courtesy U. S. Dept. of Commerce

DRY ROT?...No!...

By W. R. COMINGS

IF all American buildings were wholly constructed of brick, stone or other earthy material there would be no occasion for this article. But so long as wood is used there is reason for caution about white ants and their depredations. These insects, properly called termites, are the most persistent wood eating creatures known. The general ignorance about them in America is not strange for no books describe the American species and but few periodicals have given space to their depredations.

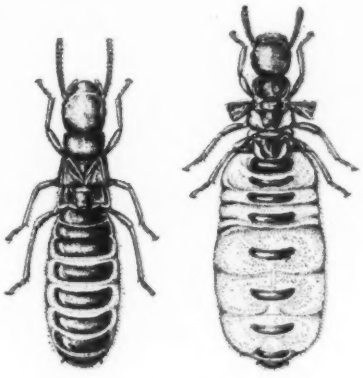
The underlying cause of much wood construction that has been destroyed has not been generally known, which easily explains why no demands have been made upon architects to plan protection against termites. The carpenters who repair the damage done seldom see the insects and ascribe the cause to black ants or wood borers of some sort. Curious people who turn over stones, cow-chips, or bits of wood in fields or forest have noticed white insects that scurry away in neatly formed grooves to their holes in the ground. Of such people only expert entomologists recognize them as members of the termite family that have caused so much trouble in Africa and India. Yet, such they are and during the past decade or more they have been finding their way into our houses and eating the wood which is their preferred food. They are more or less common in all parts of this country except a section between Lake Superior and the Rockies.

The writer's real study of them began in Hawaii about ten years ago. There, though not natives of the islands, they are so common that no house owner would claim that his buildings are free from them. During the past few years, through correspondence or by direct observation, the writer has studied them in many states. They are doing vast damage, especially in cities and towns where all-year heat furthers their work.

Termites are creamy white with noticeable jaws and are seldom over a quarter of an inch in length. They live in well-arranged chambers below the frost line—millions of them in each nest or termitarium. The workers form the great bulk of the colony. They are blind and wingless, as are also the soldiers that have more noticeable jaws, pointed and curved for defensive purposes. In the spring there may be found a great many young males and females with long wings and eyes that are defective, yet of some value. An enormous queen occupies the nest for the purpose only of laying eggs, or at least she seems unable to move about and it has not been noticed that she gives orders. But she can lay eggs—in Africa at least—at the rate of an egg a second or 86,000 a day. There is also in the nest, usually in hiding, a male who fertilizes the eggs, either before or after they are laid. The queen lives but two or three years. For longevity the workers hold second place to no other insect, as they are said to have a life span of from twenty to thirty years.

The young males and females swarm out into the light in May or June, often by the thousands. They fly awkwardly about, drop to the ground, shed their wings and dig in for a new nest. These facts of fecundity and long life explain how millions of them can be found in a chamber or excavation in the timbers of one's

A little-known and increasing construction menace that should be guarded against . . .



Termites look like white ants; their parents are small, black and have white wings. (Magnified about 12 times.)

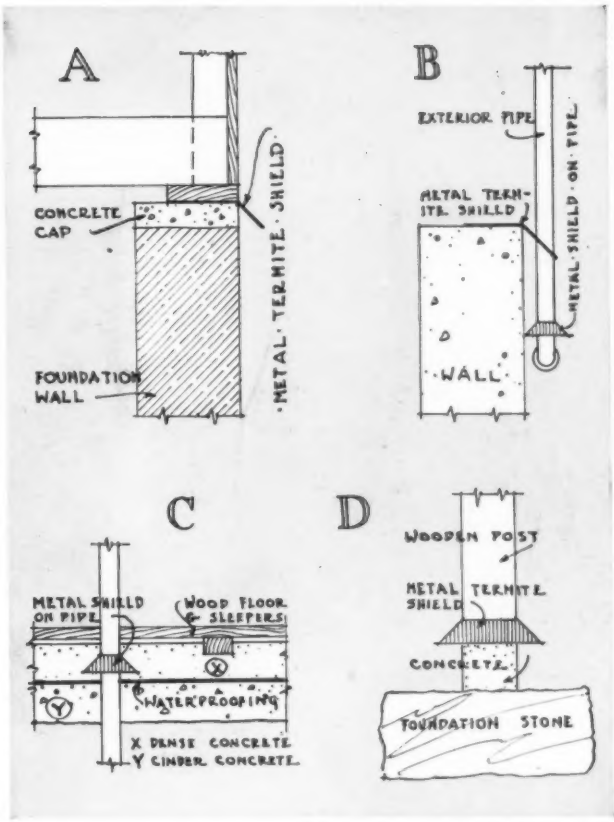
Termites

home. They tunnel in wood or in the earth by instinct if not for food.

Of the twenty or thirty species found in our forests only three or four have taken to living in wooden buildings. One that can live above ground in wood without moisture is found along our coasts from New England around to Vancouver. They enjoy equally well a heavy sill or a fine piano. Their swarming is usually indoors. Entrances or exists from their nests are like pin-holes. Another species builds nests in tree tops and is not uncommon in the Ozarks and eastward in Tennessee. They may usually be discovered by their earthy dirt-colored channels on the tree trunk. They find their food in the dead limbs. Whether these invade houses is not yet well determined. The more serious pest is the subterranean type that lives in the ground and has learned to find its food in the timbers of city and country buildings. That they enjoy their new habitations may be inferred from the fact that here they can tunnel live and eat through the winter season.

The wood fiber that they swallow is not digestible until it has been reduced to cellulose by myriads of bacteria that swarm in their intestines. If these bacteria can be destroyed, as is sometimes done by high heat, then the termites starve to death. In Hawaii furniture that becomes infested is put into closed and heated rooms until the bacteria are killed. This method is obviously impossible with the subterranean sort. Every attempt of this kind has proved a failure. House walls cannot be uniformly heated.

The spreading from a nest to nearby buildings is accomplished by tunnelling (*Continued on page* 116)



HOW TO GUARD AGAINST TERMITES

Termites bore underground to attack a building; they need constant communication with the earth to flourish. All preventive methods are therefore predicated on blocking entrance so as to make this communication impossible. ..."A" is a foundation wall capped with concrete and protected by a metal shield..."B" illustrates the shielding of vertical pipes.... "C" is a concrete floor, with wood sleepers separated from the waterproofing and set in dense concrete....."D" shows how wooden posts should be set on concrete and shielded. Methods illustrated are recommended by the United States Department of Agriculture

IF YOU BUILD BELOW LINE A - A

Termites, the subterranean or soil-nesting type, are a construction danger below line A-A; the non-subterranean type below B-B

The window problem was solved with masterly ease

...So HE TOOK THE $5,000...

. . . . and with no architect to guide him

MRS. STRONG was an elderly lady, with a little money, who bought a small farm in Connecticut as a retreat from the city in summer. Near the house was the usual tumbled down barn, inevitably doomed to be turned into a studio by the first city-dweller who should acquire the property.

Mrs. Strong spent the first summer settling her cottage, becoming acquainted with a few of the better neighbors, and planning in a vague way to remodel the barn and make it pay, somehow, for the whole property. She mentioned the idea to the very congenial Mr. Small, who occupied the next house down the road.

Now this Mr. Small was wiser in many respects than his sophisticated neighbor from the city. During the summer he made himself as agreeable as possible, without intruding, and led Mrs. Strong to talk about her scheme. He even walked around and through the barn several times with her, each time growing more enthusiastic about her originality and financial genius.

Mrs. Strong returned to the city in the fall to take up her rather active social life. She was a gracious hostess in a small way, a good musician, and she had always considered herself, probably because no one had informed her otherwise, that she had great artistic ability. In her free moments she gave much thought to her remodelling scheme and worked out the financial details to her satisfaction.

Country-bred Mr. Small did not overlook the courtesies during the winter. He sent her a pretty Christmas card, and another at New Year's. When she opened up her farm house in the spring she was surprised and delighted to receive a hot dinner, all nicely arranged on a tray, which Mrs. Small brought over herself, because she knew that Mrs. Strong would be tired after her trip from the city.

Mrs. Strong swears to this day that she did not offer the remodelling job to Mr. Small. True, she admitted, he had told her the first summer that he was a builder in a small way, but she had let it go at that. Her story is that she let him have the work against her better judgment, because he pleaded that he wanted to go into the barn-remodelling business and needed one example as a come-on for other residents who might be making money out of their property after he had improved it for them. Whatever is the true story is immaterial because the main point still remains—and that is that Mr. Small got the job. The scheme was gone into at great length, and Mr. Small agreed to do a slap-up piece of work for five thousand dollars. (There was some mention later of a letter from one party to the other confirming the contract, but as the lawyers were never able to find it, it is probably a myth.)

Impressive was his progress and enthusiasm

The barn was L shape in plan. The main building was about forty feet long by twenty-two wide,

By EUGENE de LOPATECKI

ARCHITECTS who feel that publication of this story in their local newspaper would be of service to the architectural profession are hereby granted permission for such publication

Illustrations by L. MOREY

well constructed of hand-hewn beams, with mortised joints secured by dowels. About twelve feet from the floor two cross beams, the bottom members of the main roof trusses, spanned the width of the barn. There was a one-story wing at right angles to the main part. This was to be turned into a garage and breakfast porch, with two little bedrooms squeezed in between the ceiling and the rafters. A chimney was to be built in the studio. A lean-to kitchen was part of the scheme, also a balcony in the studio, and a flight of stairs leading up somewhere to the bedrooms.

IT was agreed and understood by both the contracting parties that the job was to be thoroughly artistic. The old barn was not to loose its personality. Old material was to be used where possible, and the lovely old beams were to be much in evidence in the finished interior. Mr. Small agreed to all this and more, for his reputation as a barn remodeller would depend on this assignment.

He went to work energetically. He called in some Italian masons, who built an impressive fireplace in the studio with a grand chimney-breast all lumpy and artistic because they used the native boulders lying all about. An extra touch not in the verbal contract was added by the masons. They built a mantel-shelf out of flat stones, jutting out unevenly from the chimney breast.

Mr. Small needed light so he punctured windows in the walls at regular intervals, a single row in the sides of the barn and a double or two-storied row in the gable and where the wall space was clear up to the rafters.

In cutting spaces for the windows Mr. Small ran into a technical difficulty which he handled in an ingenious and commendable fashion. The barn was framed vertically and horizontally of hand-hewn beams

Off in the stilly night

With a grand chimney breast all lumpy and artistic

about seven inches square. One line of horizontal framing ran along about four feet above the floor level, and this row of beams interfered with the placing of the windows. The vertical framing also was never laid out for regular penetration. But Mr. Small had a definite architectural design in the back of his head, and determined not to be frustrated by any such detail. He solved the problem in the most direct way possible—he simply cut away the beams where they interfered with his windows. He did not try to make all the structural changes at once, nor did he remove an inch more of the old beams than was necessary for his openings. He framed them as he went along with nice, new two by fours, leaving the horizontal beams intact between the windows, and, in a few instances, letting the vertical ones grow out of the top of his window framing. In the end he accomplished what was in his mind, namely, a barracks-like effect on the outside.

OTHER difficulties were overcome with masterly ease. The gallery had to be built ten feet above the floor and extend three feet in front of the main roof truss. Behind the truss, on the level of the gallery, a bedroom was to be built, the truss forming the partition between the gallery and bedroom. A door had to be made to supply entrance to the gallery.

It will be remembered that the main trusses were twelve feet from the floor. Mrs. Strong insisted on the gallery, bedroom and door, so Mr. Small sliced a three foot section out of the ten inch truss member, because who would want to step up two feet and down again to get from one room to another? To keep the building from collapsing he threw a two by six across the twenty-two foot span, and supported it from below by two by four studs in the center. This joist also supported his gallery floor.

Somehow the bathroom did not work out satisfactorily. Sills had been cut and nailed down to locate the partitions, but no provision had been made to swing the bathroom door open. This unexpected problem was solved by rebuilding the (*Continued on page* 115)

RESIGNATION . . . By Cronzio Maldarelli

Winner of the one thousand dollar prize awarded by the Fairmount Park Art Association for the best decorative group for garden, park or outdoor placement. Mr. Maldarelli, of New York, is a member of the National Sculpture Society

IN THE OPEN AIR

Prize Winners in an exhibition of sculpture held by the Philadelphia Art Alliance May 13 to June 9

Photographs by William M. Rittase

ORPHEUS

By Carl Milles, New York. Awarded the five hundred dollar prize offered by the Art Alliance for a group or figure for placement in front of its building

SPIRIT OF THE SEA

By Albert Henry Atkins, Boston, creator of many architectural sculptures. Awarded the gold medal of the Garden Club of America for a decorative group or single figure suitable for a garden

"Floors" as HEATING DUCTS

By Samuel R. Lewis
Heating and ventilating engineer

A register runs the entire width of the exterior wall of each class room. Exhaust vents are on the facing wall

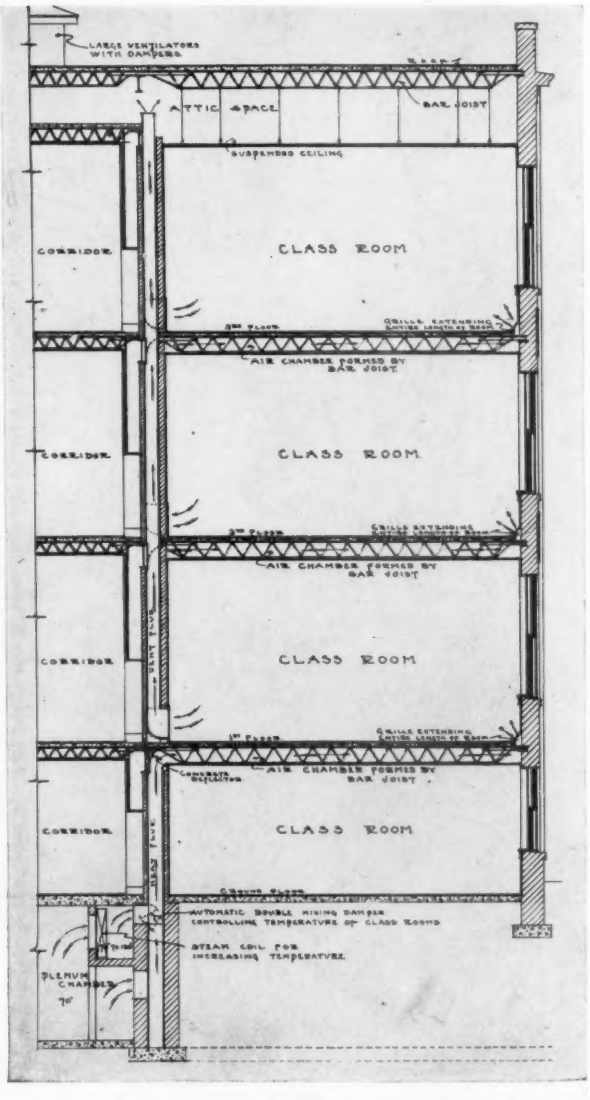
THE types of heating used in the Toledo Schools have developed gradually and have been checked by experience in operating the plants. No fixed rules covering the design of new heating systems have been adopted. For new schools, all of which are entirely of fire resisting construction, the combined system in which most of the heating is done by the air required for ventilation, has proved satisfactory. With this combined type of heating, air is delivered to each room at the optimum temperature for that room regardless of the temperature of the air which may be entering any other room at that time.

This method of combined heating and ventilating is found by experience at Toledo to be considerably less costly for fuel than the split systems which heat the rooms with radiators and which deliver air to all of the rooms at the same fixed temperature.

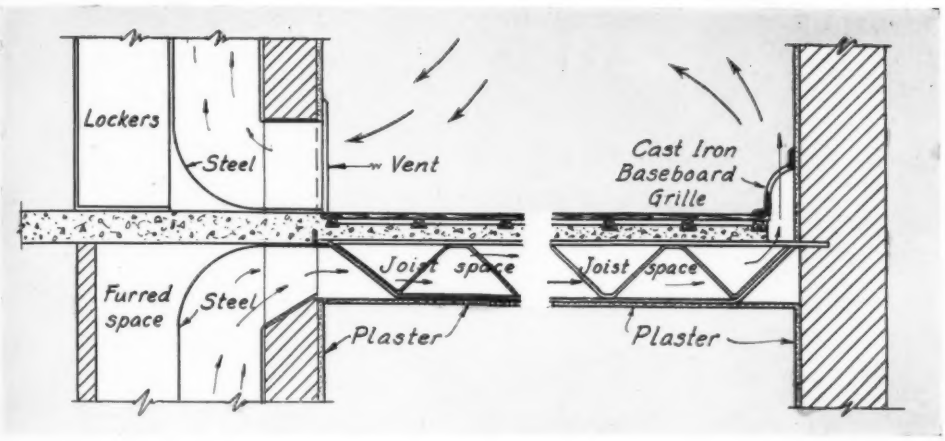
With the combined systems exposed radiators are only used in toilet rooms, corridors, offices and similar auxiliary rooms, and in corner classrooms, or those of unusual exposure. The radiators in the latter case are used to aid in balancing the work required by the warm air so that the building as a whole can be warmed in the same time-interval.

There are many old schools, formerly heated by obsolete arrangements, in which it was more convenient to use radiators, as split systems, but the fuel consumption records over a period of years show decided advantage in economy, often as much as one-third, to lie with the all-blast systems.

Where radiators are placed in classrooms the pupils who must sit close to the radiators always are over heated when steam is in the radiators, and then are



Sections showing layout of heating plant

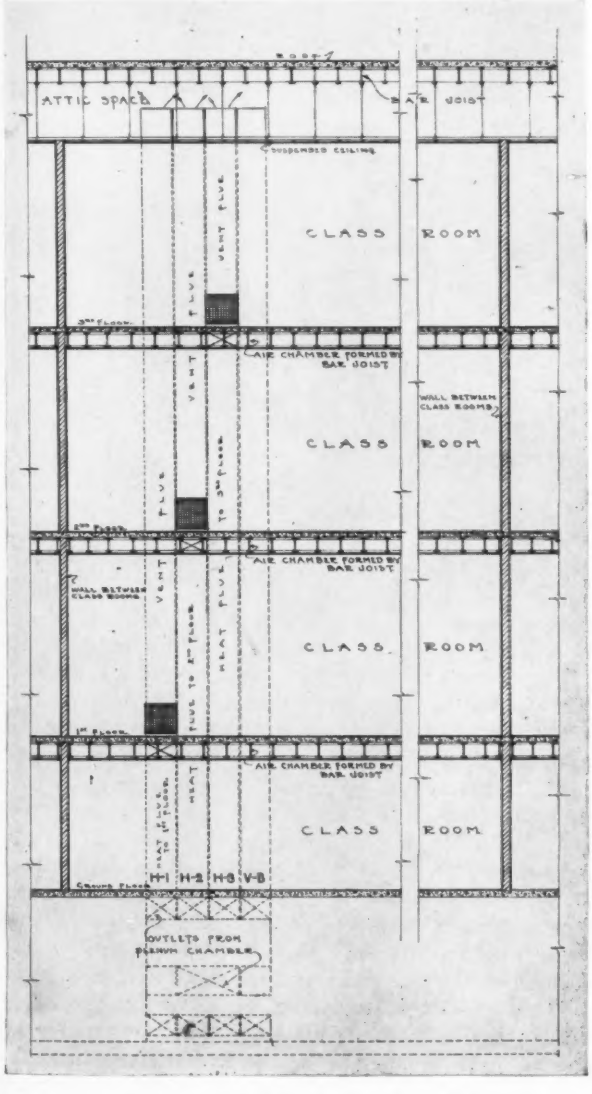


Warm air flows up interior wall stacks and through the floor construction to baseboard registers at exterior walls

•

Toledo retains a staff of architects and engineers to design and build its schools. E. M. Gee is architect; under his supervision are W. E. Hallauer, structural engineer, and Samuel R. Lewis, heating and ventilating engineer

In Toledo High Schools a type of heating installation has been developed which is inexpensive yet efficient



in Jones Junior High School, Toledo, Ohio

chilled when steam is shut off, as it must be shut off most of the time.

The usual modern Toledo school, therefore, has a combined all-blast steam plant. There is a central cold air intake, where the entering air may be filtered and warmed to about seventy degrees. Under fan-pressure the air is forced through masonry tunnels about seven feet high, which are usually under the corridors.

Since the air in these tunnels is kept at about seventy degrees, steam and return piping and hot and cold water piping and electric conduits may be made accessible throughout. These tunnels are well-lighted, painted white, and thoroughly drained. The floors are graded, and are arranged for easy cleaning by means of vacuum or waterflushing.

Vertical flues lead from the air supply tunnel to the various class rooms. These come naturally in groups of three for a three story building, and often can be arranged in groups of six.

AT the base of each group of flues, accessible in the tunnel with all of its service piping, is a three-radiator-deep reheater. From this reheater to each of the class room flues there is a warm air connection. From under each reheater to each class room flue there is a cool (70 degrees) air connection. In each flue at this point there is a double mixing damper which is controlled by a thermostat in the class room which it serves and which, moving slowly or standing in a partly open condition, admits warm air, cool air, or a part of each as determined by the thermostat, so as to maintain the required room temperature. The volume of air is constant; always in excess of the six changes of the entire class room content required by the Ohio law, while the temperature is variable, anywhere from 70 degrees to 120 degrees, as conditions may require.

Consistent zoning of the heat effect under manual control of the engineer, covering the building as a whole and tending to balance the varying effect of sun and of storm, has been practised in the Toledo schools for many years. (*Continued on page* 96)

ARCHITECTURAL EXHIBIT

seen by 100,000 people

IN KANSAS CITY HOME SHOW

By M. S. Munson

• Local architects worked on many committees and designed a number of manufacturers' booths. Five rooms were built and furnished in 18th century New England Colonial to help sell good design. • Local architects exhibited collectively, with several architects always in attendance to answer questions. • 100,000 *attendance in city of* 400,000. *• Use of architectural service stimulated as direct and immediate result. • People visit a home building show because they are interested. Collectively they are, therefore, ideal prospects for architectural service if architects will take advantage of the opportunity. And incidentally, such shows offer splendid opportunities to improve public taste in architecture*

IN various cities, both large and small, home building shows or expositions are held annually. These expositions, and many may be rightly termed such, have been more or less successful in interesting the general public. They have accomplished much good in carrying the message of good design, good taste and good materials to the everyday home buyer. Correlating this character of publicity to actual architectural business has always been a difficult problem for those in the architectural profession. To cash in with actual business secured as a result of such an undertaking is no simple matter. It may be granted that everything of a publicity nature concerning building design and decoration, that is good, advances the volume of business. But to trace tangible results from it is something having an entirely different aspect.

The Better Homes and Building Exposition of Kansas City, held under the auspices of the Real Estate Board, is one of the outstanding expositions of the country in many respects. Tangible benefit to local architects is shown by the business developed during this show that finds its way onto the drafting boards of architects of

THE ARCHITECTURAL EXHIBIT
was elevated to catch the public eye. This and the facing picture were taken from approximately the same point of view

A manufacturer's booth, designed by an architect

Kansas City and its trade territory. This show, a non-profitable but self-sustaining project, has become an annual event. Many of the various working committees are headed by architects, of whom over a score belong to the Kansas City Real Estate Board, being civic-minded men of a type usually found in every worth while movement. The result of this architectural cooperation is a show of unusual merit. No small amount of business is secured by those architects participating, the benefit extending to a lesser degree to those others not so actively concerned.

The exposition is usually held during the last week of February, which is a normally slow season in the Kansas City territory. The motif of the 1930 event was taken from the New England Colonial of the 18th century. The decorative scheme of the hall, feature exhibits and various material and service exhibit booths was carried out with some relation to the period. A section of the hall was given over to the local chapters of the American Institute of Architects and the Architectural League of Kansas City. This section was used to exhibit representative examples of work done by individual offices. Hundreds of photographs, renderings and drawings in various media of recent projects were hung in this section for the inspection of the public. This feature proved quite popular. Representatives of staffs of the various local offices were in attendance at this section to discuss with the visitors the various arrangements and features of the exhibits. Valuable contacts were made between prospective builders and office representatives, which resulted in commissions for work.

In the center of the hall was a cooperative feature exhibit consisting of five interiors of rooms, built to full scale, decorated and furnished completely in 18th century New England Colonial. This feature exhibit was the work of Harry Wagner, architect, chairman of the Design and Decorating Committee. It was exceptionally well executed in every detail and was the center of interest of the exhibition. The five interiors, consisting of dining-room, living-room, den, play room and bedroom, were completely (*Continued on page* 114)

Three VERMONT sketches

by

F. M. RINES
BOSTON, MASS.

"The Willows"

A Scene in Weston, Vt.

"Covered Bridge" Bartonsville, Vt.

EWING GALLOWAY

Can the RAIN get in?

By John E. Nicholson

Nicholson & Galloway, New York

THE cause of leakage through the masonry walls of the modern skyscraper is a very serious problem that confronts every architect and builder today. It is more and more coming to be realized that this whole problem boils down to installing proper spandrel waterproofing and other flashings at the vulnerable points in the building.

In the thirty years or more that our firm has been specializing in making buildings water-tight, we have seen many friendships of long standing between architects and builders broken because a building on which both worked failed to keep out the first severe rainstorm. I am reminded of one building we were called in to repair—a building that would never have leaked at all if a little more care had been used in its construction.

The architect had designed the usual thirty story office building, with set-backs, flat tile roofs, parapet walls, and the other complications required by usage and the New York building laws. The location, while ideal for offices, was difficult for the builders, as the site was open to the elements on nearly every quarter.

This open location was taken into consideration when the methods of flashing were specified and detailed. The curtain walls were of four inch brick veneer backed up with eight inches of hollow tiles, damp-proofed with a trade-marked preparation, furred-off and plastered. Spandrel waterproofing was put in on every floor.

Seemingly everything had been done to keep the tenants sheltered from the rain. Up went the building, in the usual incredible time it takes a good builder to reach the New York sky. The tenants moved in, one well-known company taking half the available floor space from plans.

The first Northeaster that came along went through the twelve upper stories of that building as though it were a sieve. The leaks weren't just damp spots on the walls and ceilings, as is usually the case. The water actually ran in on the floors from under the baseboards. Pails had to be set under the girders that carried the set-back clerestories.

The condition was almost beyond the comprehension of both the architect and the builder, who felt that they had taken every possible precaution. They tried every cure-all on the market without a noticeable improvement.

This went on for six years. Each year the face brick was treated with a different preparation until at length the whole upper part of the building took on a decidedly dejected appearance.

Finally the corporation which had taken nearly half the building delivered an ultimatum. They had just gone

A thirty story building leaked like a sieve for six years. How the leaks were located and repaired is described by Mr. Nicholson, who also tells what should have been done in the first place

through a very trying three day period of rain, and they announced that either the leaks were to be stopped or their lease cancelled.

Our firm was called in to make an examination. As is usually the case, we found the five upper stories were worst. The north and east elevations were quite generally full of leaks. It was hard to understand why they should be so bad, inasmuch as all the spandrel girders had been waterproofed.

The worst leaks, however, were found under all the girders that carried the set-back walls.

Scaffolds were swung on the outside walls, and cuts were made above the spandrel girders. The first large opening showed that the membrane waterproofing, although in place only six years, was in very bad condition, the felt paper having given way in many places. There were a number of cuts and tears in the paper which made the condition much worse than it would have been if there had been no waterproofing at all. The saturation which was caught over the spandrels was imprisoned there until there was enough to work its way through the openings and run into the building.

We have always advocated the use of copper for spandrel flashings. If it had been used in this building, the entire trouble would have been avoided. Copper flashing that we have put into two of the larger New York buildings has brought excellent results at a cost that was only slightly more than that of the ordinary structural waterproofing which is so commonly used.

In the building under discussion, copper flashing finally was installed. However, the difficult conditions made the cost of the labor nearly forty times as much as if the flashing had been installed in the first place.

The difficulties under which the work was done can be imagined if it is remembered that everything had to be done from swinging scaffolds. Not more than four feet of masonry could safely be cut off at one time.

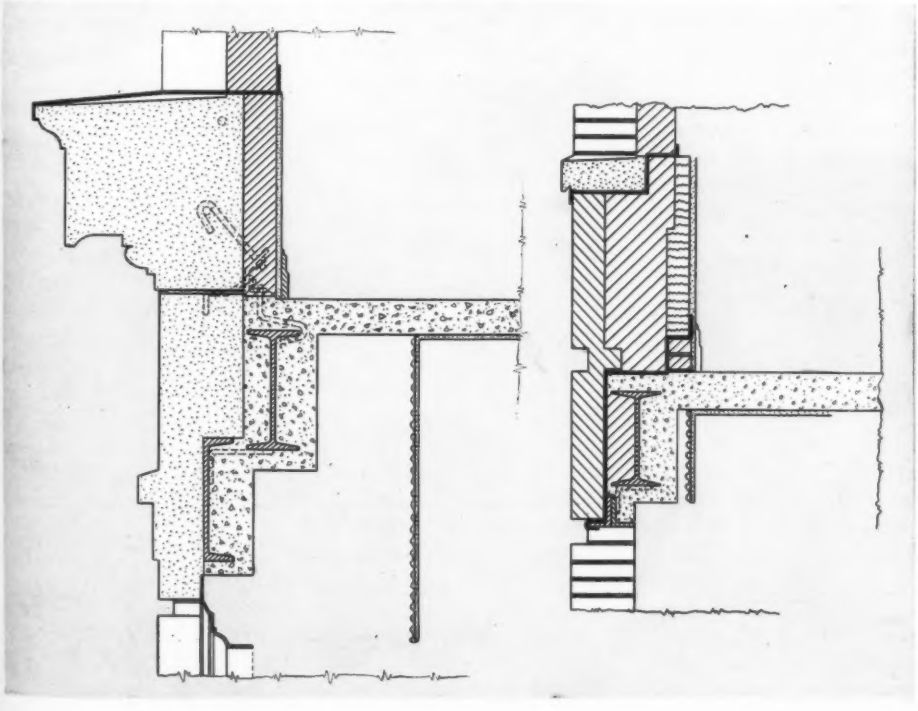
The new copper flashings were run completely through the wall, and turned up three inches against the baseboards in the offices. Weep-holes were left to allow the collected water to run out.

THIS eliminated the danger of having the water rise over the three inch turn-up in back. It is interesting to notice the water seeping out of these weep-holes two or three days after a heavy rain.

The cap-flashings to the set-back clerestories were found to have been built into the masonry only four inches. A great deal of water was finding its way in back of these flashings, soaking through the floor slabs, and coming out through the ceilings directly below.

On the other hand, the cap-flashings to the pent-houses went all the way through the walls, but instead of being turned up at the back, they had, through ignorance, been turned down. In this way they were directing the seepage into the building instead of out.

Here is a typical case where a little more care and thought on the part of a (*Continued on page* 94)



FLASHING DETAILS

New copper flashings were run completely through the wall. Labor costs were forty times as high as they would have been if the job had been properly done in the first place. This is another example of the high price of cutting cost in the wrong places

. . . As It Looks

Airport Pays 8% Profit

THAT aviation has already progressed far enough to make airport operation profitable is indicated by the fact that the airport at Tulsa, Okla., is being run at a profit of 8 per cent. The time is not far distant when the plan and design of airports may become a major part of the practice of many architects. It is not too early for the profession to sell the idea that even a hangar may be made a beautiful thing.

Manufacturers and Architects

FEW if any lines of business enjoy the sincere spirit of cooperation between their constituent parts that characterizes the relationship between the architect and the manufacturer of building materials. This fine spirit was much in evidence at the annual convention of the American Institute of Architects, where F. P. Byington, president of the Producers Council, stated before the convention that he pledged the Council to cooperate with architects in any way they deemed desirable. After all, the aim of both architect and manufacturer is the same. For if the manufacturer supplies the product, the architect assembles it with others and makes its use possible. The ultimate result is the best possible use of that product in the structure for which it is specified to the ultimate satisfaction of the owner.

Louisiana Wants Builders Licensed

LOUISIANA building interests are interesting themselves in having a bill introduced into the State Legislature to the effect that there shall be enacted a State license law for contractors. The proposed statute makes provision for a board of five examiners to pass upon the eligibility of contractors. This is another step in the right direction in line with the aggressive policy of the State to drive the dishonest and incompetent contractor out of business.

Advertising and Architecture

CONSIDERABLE disappointment was expressed by many delegates to the recent annual convention of the American Institute of Architects. They had hoped that there would be free discussion of the whole question of paid advertising as a result of which the Institute would take appropriate action. Instead of this opportunity being presented the delegates were told what the Committee on Public Information had decided before the meeting—to go on record as against the use of paid newspaper or magazine space. Distasteful as this was to Western and Southern delegates, yet it was highly approved by those from the East. As a matter of fact, as soon as one gets West of the Hudson River the attitude towards paid advertising seems to become more and more approving. It is to be expected that this attitude of the younger part of the country will affect the east sooner or later. Certainly the profession of architecture should gird its loins for battle and not stand idly by while building projects on all sides are executed by incompetent hands.

New York's Most Ugly Building

PUBLIC interest in architecture seems to be on the increase, for no less than a column on a recent editorial page of the New York *Evening Sun* is devoted to "Our Ugliest Building"—the City Hall Post Office. There is an able expression of architectural reasons as to the cause of this ugliness and considerable comment on its architect, A. B. Mullet. The editorial concludes with a quotation on the death of the architect, from an 1890 issue of THE AMERICAN ARCHITECT, "Whatever may be thought of him as an artist, all architects will agree that he was a man of very great ability and energy."

Manufacturers Advertise Architect

"CONSULT An Architect —The Service Is Valuable." This is a line carried at the bottom of all advertisement of the Kawneer Company used in popular magazines and business papers. This company, like many others, realizes the importance of having its product used under expert supervision. Lack of such supervision and, of course, intelligent specification, is detrimental not only to the manufacturer but also to the general public. It is to the best interests of the manufacturer to urge his customers to engage an architect and it is to be hoped that the number of manufacturers realizing this will constantly increase.

Advertising for Doctors Urged

FOREIGN language papers in New York City have been carrying the advertising of quack doctors. Dr. Shirley W. Wynne, Commissioner of Health, has announced that the Health Department will help the foreign language press to secure the advertising of reputable doctors if the papers will agree to eliminate the advertising of quacks. He points out that immigrants who can not speak English do not know how to reach a good doctor and that this field of activity is left open to the charletan. The advertisements suggested by Dr. Wynne would merely consist of the name and address of the doctor, his office hours and perhaps his specialty. When Dr. Wynne was asked if he thought doctors should also advertise in the English language press he said, "I cannot see why not." Incidently, about a year ago the Academy of Medicine and the New York County Medical Society established a committee on press relations.

to the Editors . .

Fire Losses on Temporary Roofs

THE practice of putting temporary roofs on fireproof buildings which are later to be built higher has caused another serious fire. This time it was the Breslin Building, Louisville, Ky. The fire probably started in a pipe shaft carrying electric wires and carried the flames to the combustible roof. Short-sighted economy such as this only too frequently proves to be an expensive saving.

Taxing Church Property

SHOULD church property, when used for business purposes, be taxed? That was the subject of an editorial in the April issue of THE AMERICAN ARCHITECT, entitled "Church Business Buildings." Elbert M. Conover, director of the Bureau of Architecture of the Methodist Episcopal Church, writes, "Insofar as income producing property owned by the Protestant Churches is concerned, they pay regular taxes and this Bureau is strongly of the opinion that there should be no exemption of taxes from income producing property owned by churches even though the income may be used for religious or charitable purposes."

Guide Books and Architects

GUIDE books seem to be more interested in the number of tons a statue weighs or the years taken to complete a building than in the name of their respective creators. Creative genius should be recognized by the publishers of guide books and the conductors of tours. Why should not the guides on the "rubberneck" buses of New York point out the Woolworth Building as the work of Cass Gilbert, the Chrysler Building as the work of William Van Alen, the Public Library as the work of Carrere and Hastings? It is a recognition to which the architectural profession is honestly entitled.

Padlocking Protested

THE invasion of property rights under the prohibition laws by the padlocking of income-producing property has aroused the ire of the National Association of Real Estate Boards. This Association points out that an owner may have no knowledge of violations, likewise that if he has such knowledge and institutes proceedings against his tenant, that the tenant may recover damages if the owner can not prove his case. Therefore the Association recently passed a resolution condemning such padlocking, reading in part, ". . . the many serious complaints made to this association, setting forth cases of substantial injury done owners who had no knowledge of, nor in any way participated in, tenants' violations, leads this association formally to protest against this encroachment on elementary property rights. . . . Various large financial houses hesitate to lend upon certain classes of property because of the danger of closure and loss of the sources of income.

"Be it resolved, therefore, by the Board of Directors of the National Association of Real Estate Boards that it is not and should not be necessary to enforce the Prohibition Law by closure of premises, and until these unjust provisions can be removed from the laws, that every effort be made to avoid their application, especially where the owner has had no opportunity to abate what is declared in such laws to be a nuisance."

Tacoma Doctors Use Paid Ads.

PAID newspaper advertising is being used by the Pierce County Medical Society in the three Tacoma daily newspapers, the advertisements being intended to continue once a week for the rest of the year. This advertising by a profession to which architects are always comparing themselves is extremely significant, particularly as the reasons for the campaign are similar to the reasons advanced by many architects. The campaign was decided upon after a two-year period of study, it being felt that other types of practitioners were making unusual gains in public esteem and that the public service which the profession might render was less effective than it should be because of lack of understanding on the part of the public. An advertising agency was engaged, and the campaign inaugurated. Copy and lay-out is dignified, the advertisements being informative and largely along preventive lines. Quoting from one of the Society's advertisements: ". . . will make known essential facts in the progress of medical science, the real work and aims of the organized medical profession, and its everyday relation to all classes of people. The qualifications demanded of the competent physician today, and the standards by which he is identified, may be indicated." Incidentally the Society numbers among its members practically all the practicing physicians and surgeons of Pierce County, and has not changed its attitude against paid advertising by individuals.

Architect for Police Commissioner

WHEN William F. Deegan, an architect, was proposed to succeed Grover A. Whalen as Police Commissioner of New York City, the architects of that city urged that he be retained as Tenement House Commissioner because of his peculiar fitness and excellent record in that office. Both the Brooklyn and Manhattan chapters of the A. I. A. wrote letters urging that retention. This is the first time that an architect has been suggested as police commissioner. There are many civic posts that architects could fill to excellent advantage not only to their city but to their profession.

A DEVELOPMENT OF SMALL HOUSES IN WHICH

Every House Is Beautiful

. . . and the architect tells how they were designed for construction at less than 50 cents a cubic foot

BY CLARENCE C. MERRITT

Clarence C. Merritt is a registered architect in New York State. He studied architecture at Columbia University and is developing property with low cost houses that are exceptionally attractive

FACTORS IN PLAN AND DESIGN

- *Rectangular first floor with area of from 625 to 1100 square feet.*
- *Low, compact houses to minimize cost.*
- *Intelligent use of stock mouldings and inexpensive materials well combined.*
- *Proportion, fenestration and orientation.*
- *Colonial type costs less than other types.*
- *Include features appealing to many people.*
- *Consider the contour of the ground.*
- *Use nationally advertised products for reliable service from manufacturers.*

IDEAL accomplishment in the planning of small houses has been outlined by Ruskin who, in his frequently quoted "Lamps of Architecture," said, "I would have then, our ordinary dwellings built to last and built to be lovely; as rich and full of pleasantness as may be within and without."

The problems an architect must face in designing houses of moderate cost in the higher type of development often draw on the last ounce of ingenuity and resourcefulness. The challenge in this type of work has always appealed to me, and my attention for many years has been given to designing small houses devoid of expensive features or special materials—but desirable for their architectural qualities and substantial construction that assures both a homelike atmosphere and permanency.

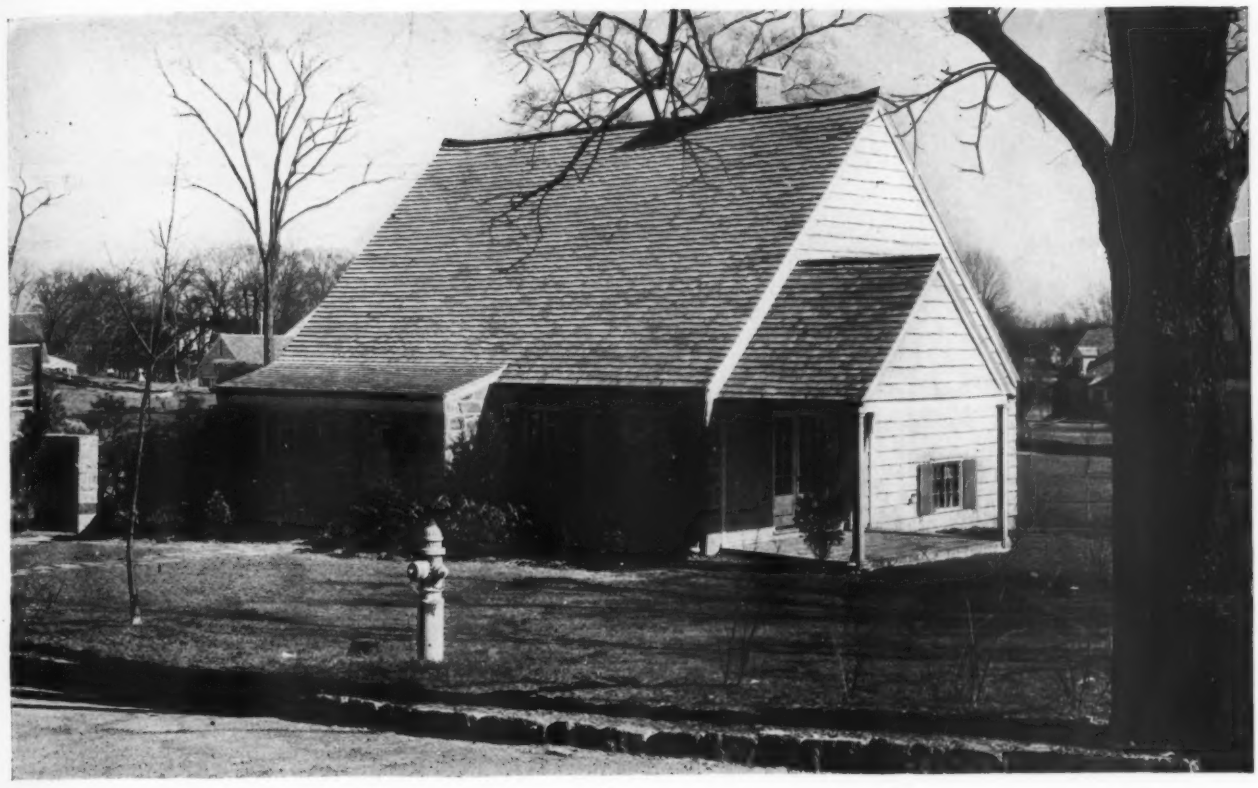
As a result of carefully checked experience I have found that for the smaller houses those rectangular in plan having a ground floor area of from 625 feet to 1100 feet are the most economical to build. When figuring the price on the cubage basis the house with 1100 feet of floor area is, of course, more economical than that with 625 feet. When the shape becomes prominently irregular or the dimensions produce a floor area above or below the figures mentioned, the cost increases out of proportion to the space provided.

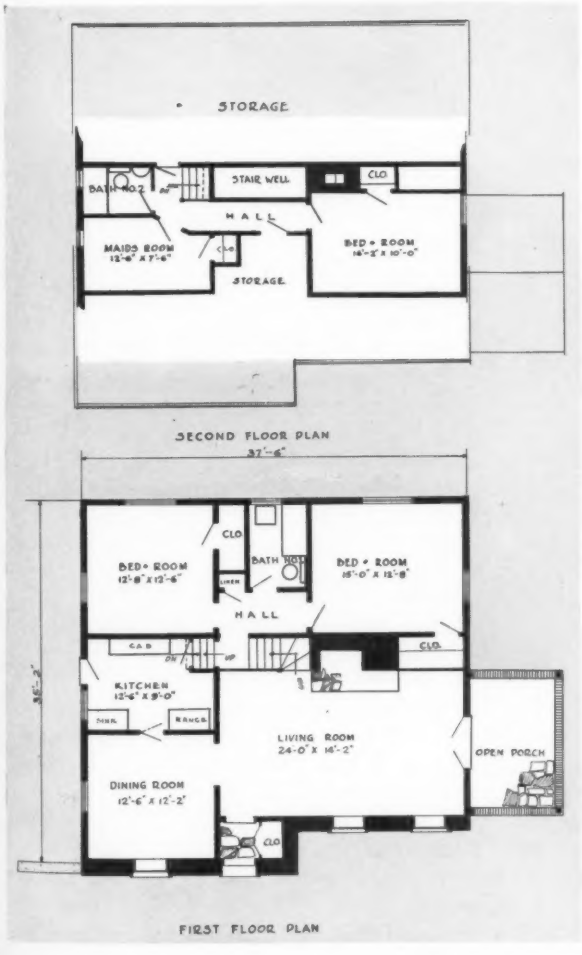
It has been my practice to keep the ceiling heights as near 8 feet as possible, which brings the ridge from 22 to 23 feet above grade. Low, compact houses reduce the cost in various ways, not the least of which is the expense connected with scaffolding.

Small houses do not need special details to make them picturesque or pleasing to look at. An intelligent combination of stock mouldings and other materials may be planned to produce a good effect.

Important requisites for the success of a small house plan, like any other, are proportion, fenestration and orientation. Because of the simplicity of line and range

10 pages of plans and designs from a development at Greenwich, Conn.



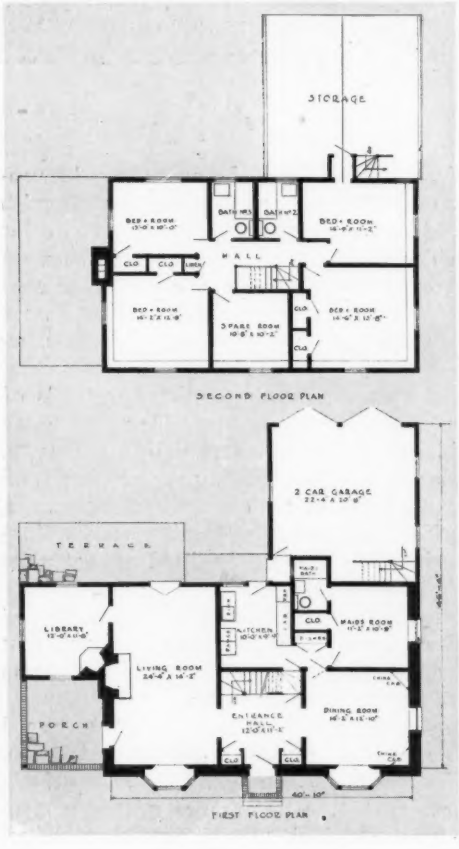


of materials, designs of Colonial influence may be produced at lower cost than the so-called English, Spanish or other types. If a good sense of proportion and color is employed in designing the exterior, for instance, no need arises for expensive decoration or complicated construction. The solution to the architect's problem in giving his client value for his money lies mainly in using inexpensive materials well combined. By this is not meant the use of cheap materials or flimsy methods of construction, but the best materials possible which today are produced in quantity in excellent design and taste. Omission of labor saving features is poor economy and the architect cannot overlook the convenience factor.

I have made it a point to include sanitary walls, linoleum floor coverings and completely fitted cabinet units in the kitchens. Electric refrigerators have now become a part of the original plan as well as the sink, range and other standard equipment. It is my experience that simple pine panelling, wall paper, or textured treatments for the interiors are equally successful.

The finishing touches that draw the line between good taste and bad taste must be given expert consideration. It is not by chance that a Jean Patou dress is invariably more complimentary to the appearance of the woman wearing it than one made by the village dressmaker. Nor is it by chance that the final decorative touches of a house make or break the spirit it is planned to reflect.

Years ago, when one was fortunate enough to have the money to purchase an automobile, he first paid for the machine and then went about buying the lamps, the bumper, the presto tank and other necessary equipment. Now for one price you get the machine with every conceivable piece of equipment from an ornamental radiator cap to a radio! This principle may profitably be



applied in planning and building. When clients know the cost of the completed house ready for occupancy they are less apt to be misled and dissatisfied. Often a splendidly designed house will stand for years without landscaping because the owner has overspent his budget in the original construction, overlooking many items that are too often considered extras. Thus the whole effect of the design is lost. Houses are really the background for planting and the backbone for decorating. Without these two necessary factors the setting and the atmosphere are entirely lost.

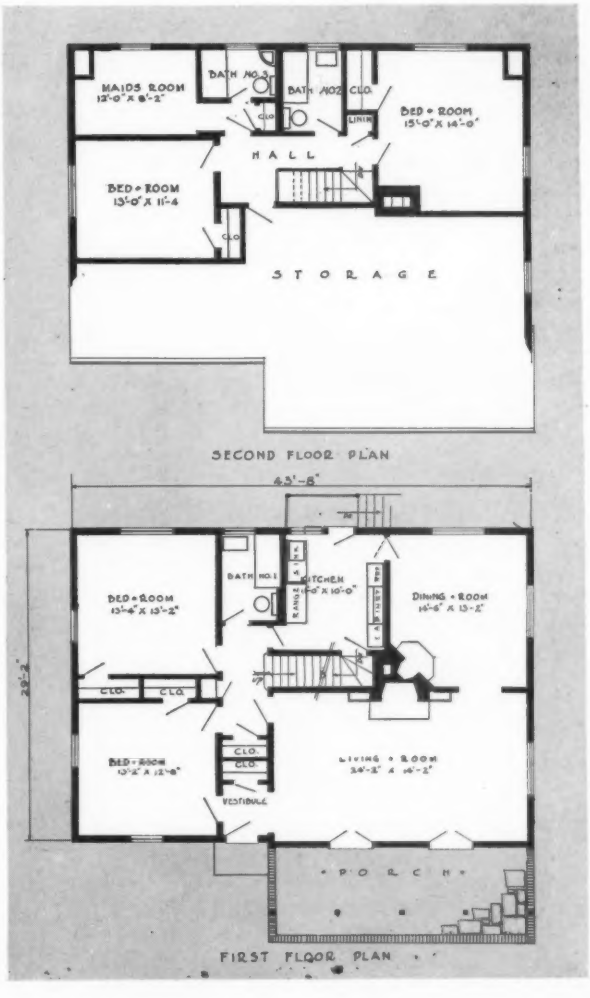
The houses illustrated were built for an average of fifty cents per cubic foot. This price included financing, planting, screens, refrigerators, all decoration—in fact,

the purchaser had only to hang up the draperies and move in the furniture to have a real home. The designs average a complement of four main bedrooms with two baths, a maid's room and bath, living room, dining room, kitchen and two-car garage. Some have small libraries. The complete cost of the house should not be more than approximately four times the cost of the land. I have found that this ratio is a good one and well balanced as an investment for the average buyer of a modest house.

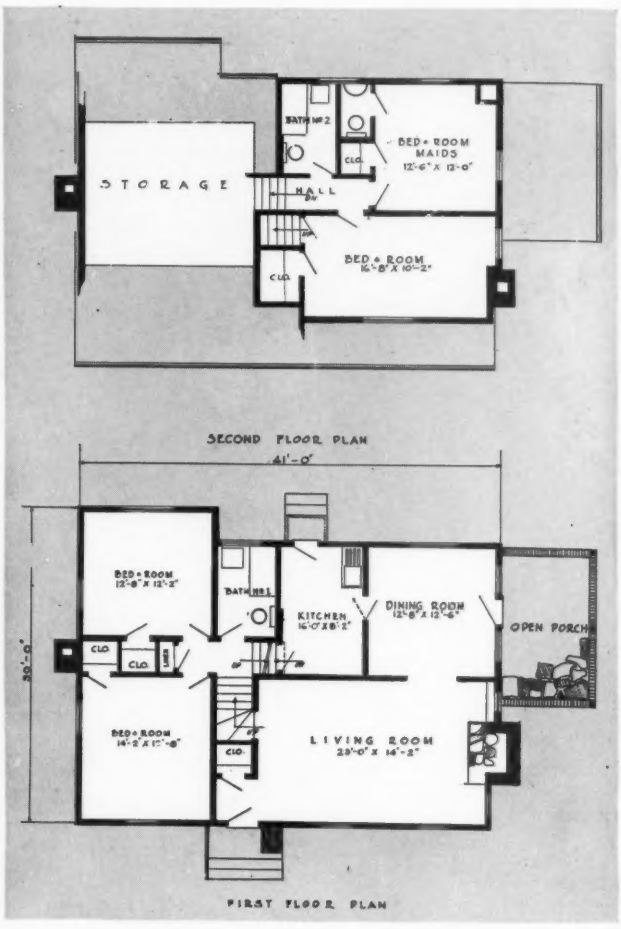
There are several things that I always keep in mind when designing a house, whether it be for a client who wishes it for his own residence, or for resale. The first thought is to include features that appeal to a large number of people. Unique arrangements which appeal only to a particular type of mind are avoided. An attempt is made to eliminate the novelties accompanying most speculative building that increase the risk of pleasing new buyers. The house should be sufficiently captivating in its architectural, structural and decorative qualities that it will practically sell itself.

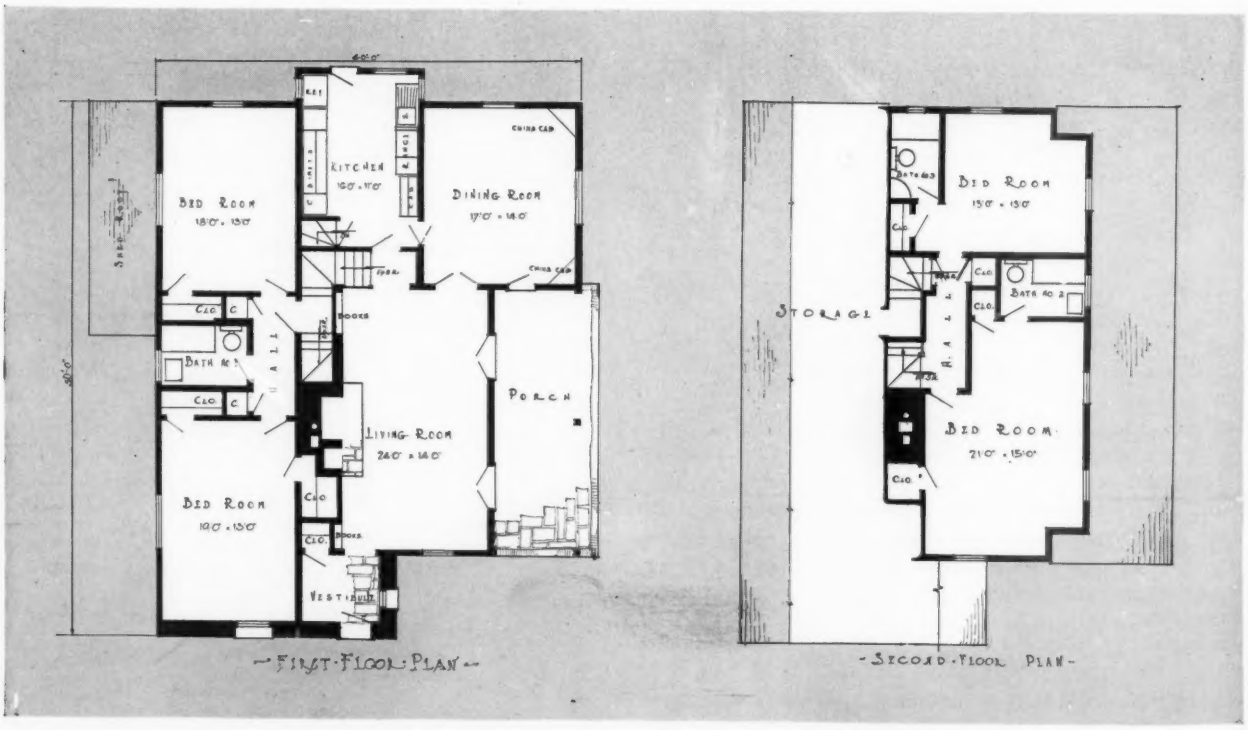
It is particularly important that the house be planned to fit the contour of the ground that forms its base. With a little study it is often possible to utilize grades to eliminate excavating and add cubage to the house at minimum expense.

For many years I have used nationally advertised products of responsible manufacturers for several reasons. Experience has proven to me that those products marketed over a large area and intelligently promoted in the magazines reaching the logical markets are, for economic reasons, supported by a policy which pledges the manufacturers to stand behind every article they sell. As an illustration, only recently trouble developed in the hot water system of a house completed some eight months ago. Forty-eight hours after the complaint had been made known to the manufacturer it had been investigated

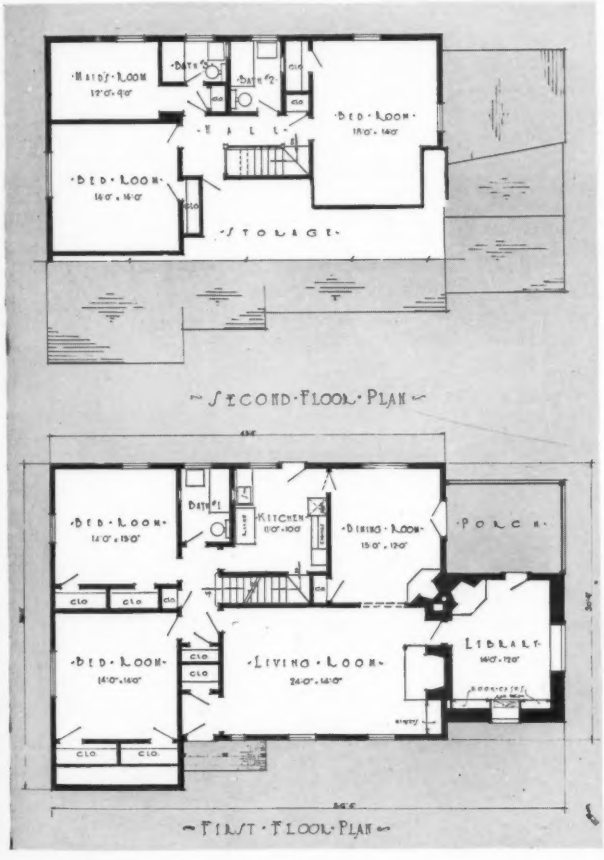


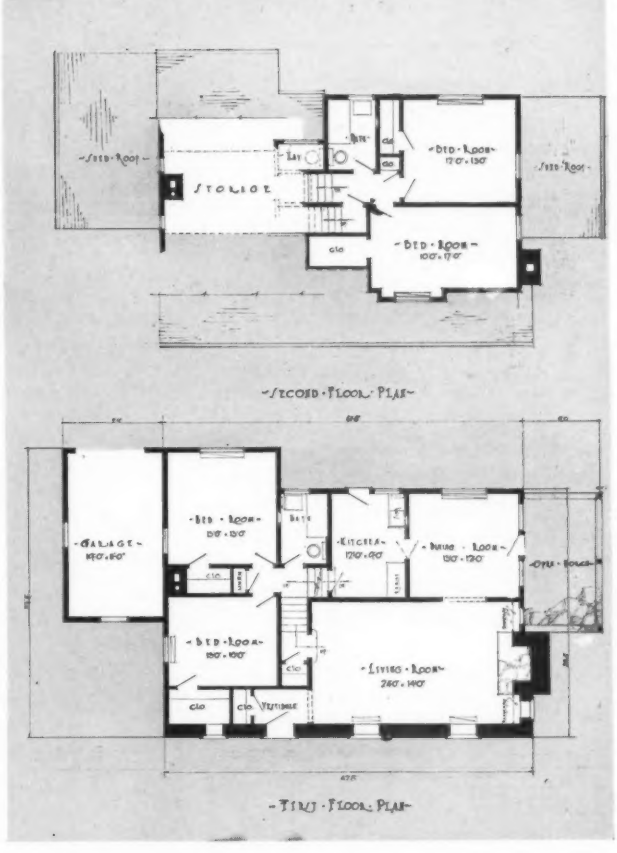
. . . every DEVELOPMENT





can be MADE ATTRACTIVE

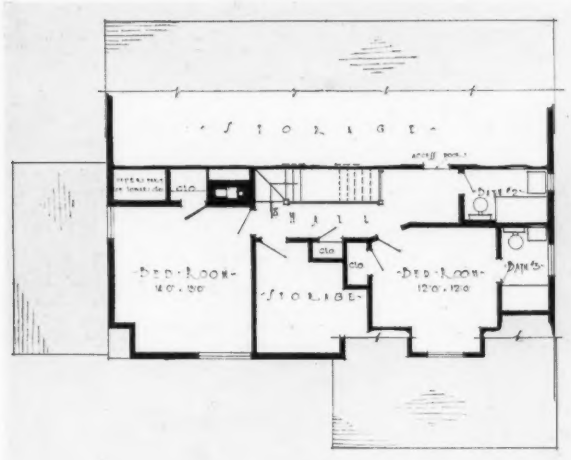




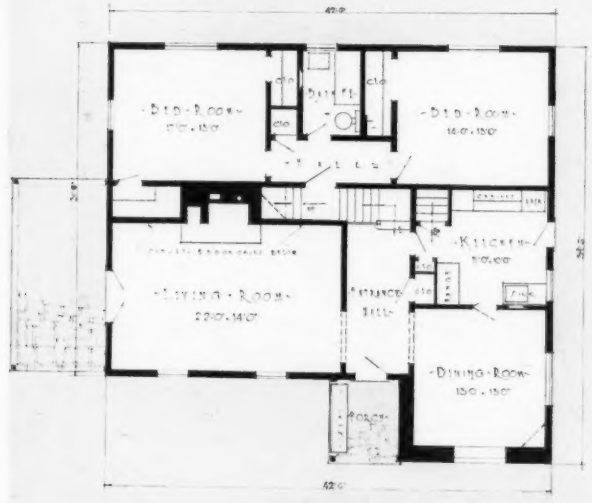
and the defective equipment replaced. A few days prior to this incident the representative of a nationally known manufacturer of stock millwork, of his own volition, replaced a door that was not quite up to standard.

Incidents such as this, instead of leaving the client with an unfavorable impression, actually incline him more favorably towards his architect. For he feels that his architect not only designed and specified wisely, but took the trouble to follow through on every detail in order that the client might have the fullest measure of service and satisfaction.

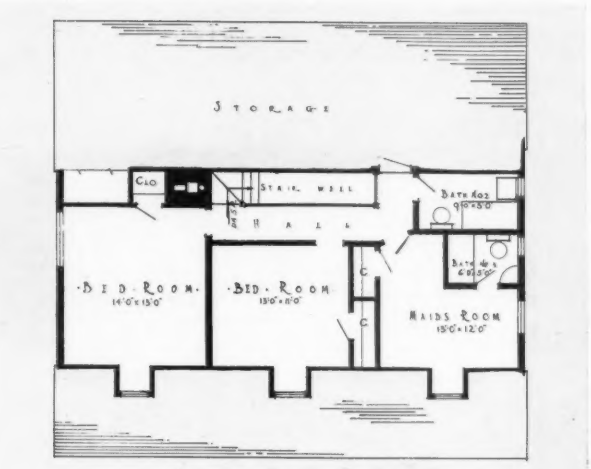
In summing up the procedure of creating attractive, moderate priced, small houses I merely cite the history of my own experience in saying that low, rectangular houses of the Colonial influence with not over 1100 square feet of floor area offer the greatest possibilities. Plan the job from grading to decorating as one unit. Use nationally advertised materials of authentic design and substantial manufacture. Conservative employment of line, proportion and finish must be enlivened by a warmth in the natural qualities of the materials used and an appreciation of their relative values.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



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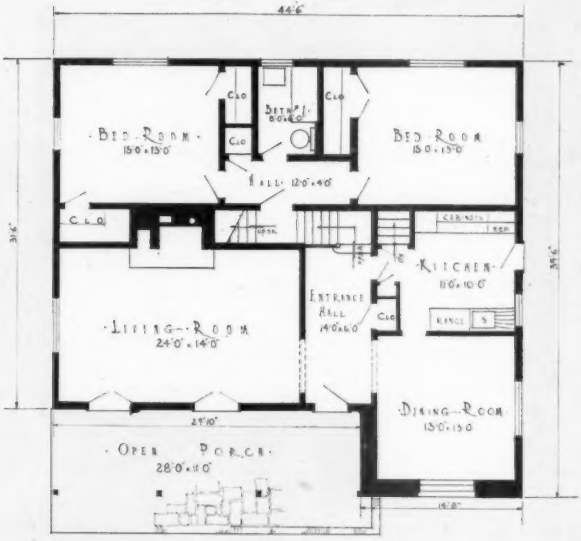
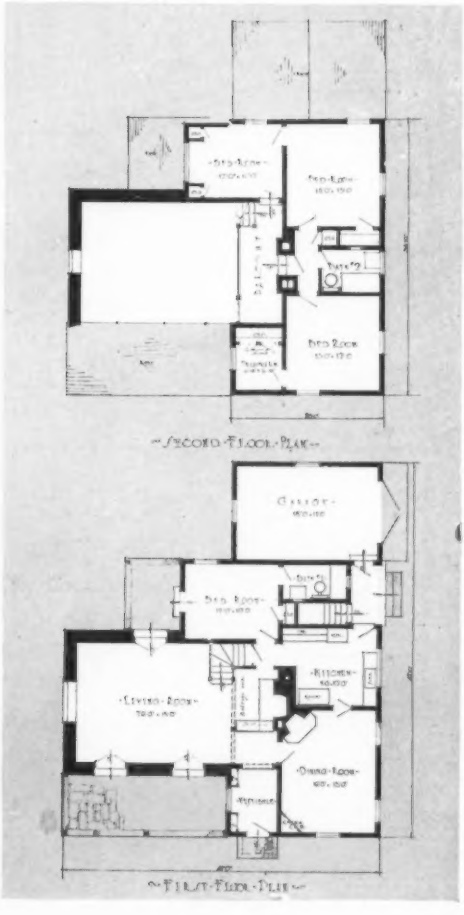


FIRST FLOOR PLAN

Every house in the development at Greenwich, Conn. was designed and supervised by an architect

CLARENCE C. MERRITT, ARCHITECT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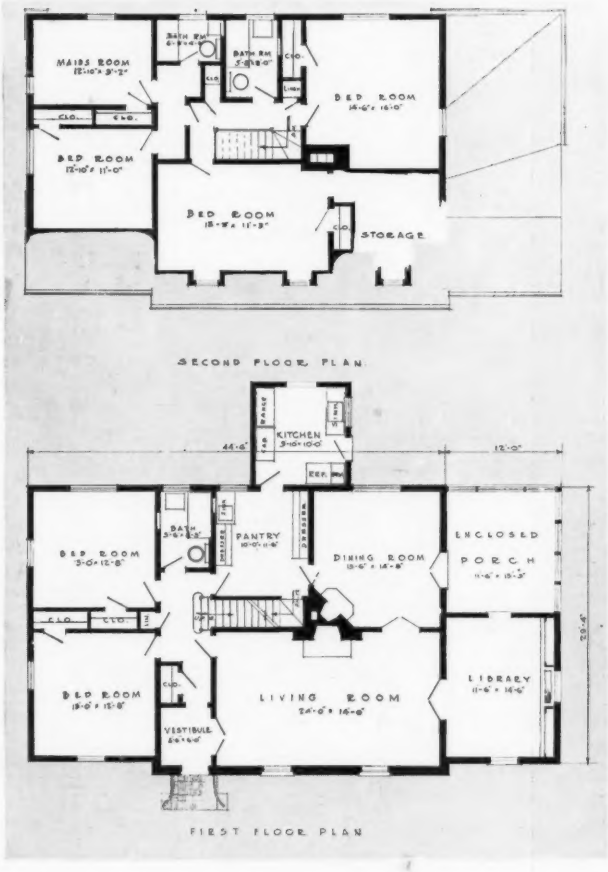
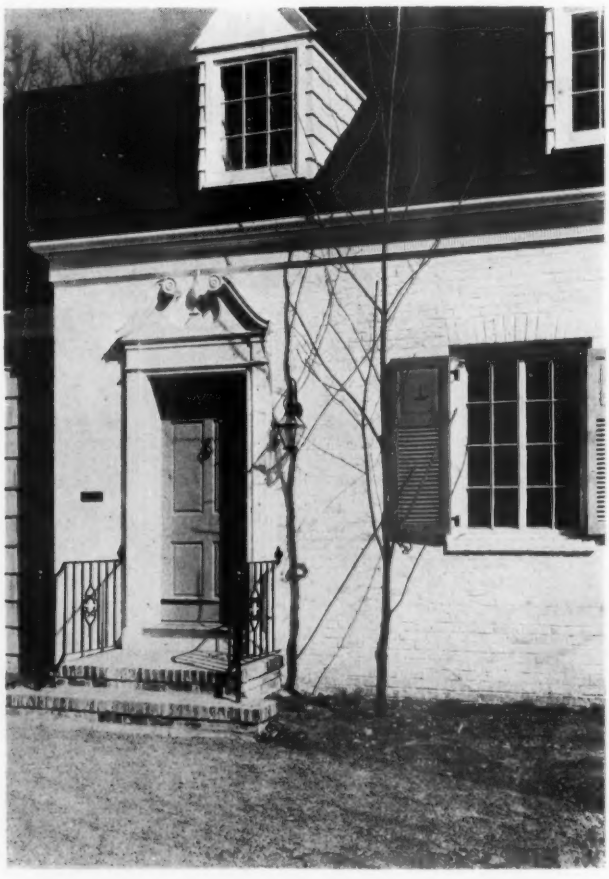
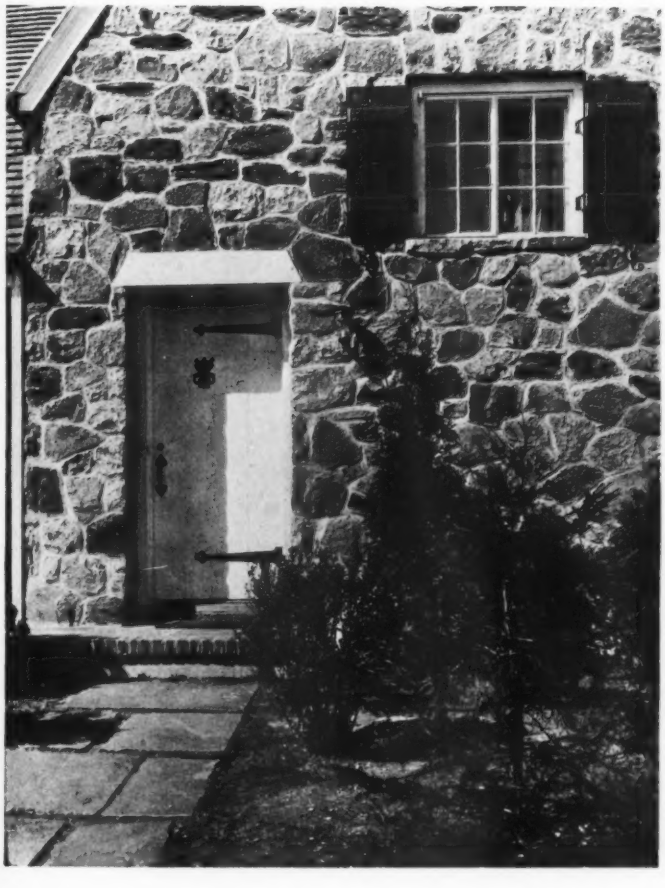
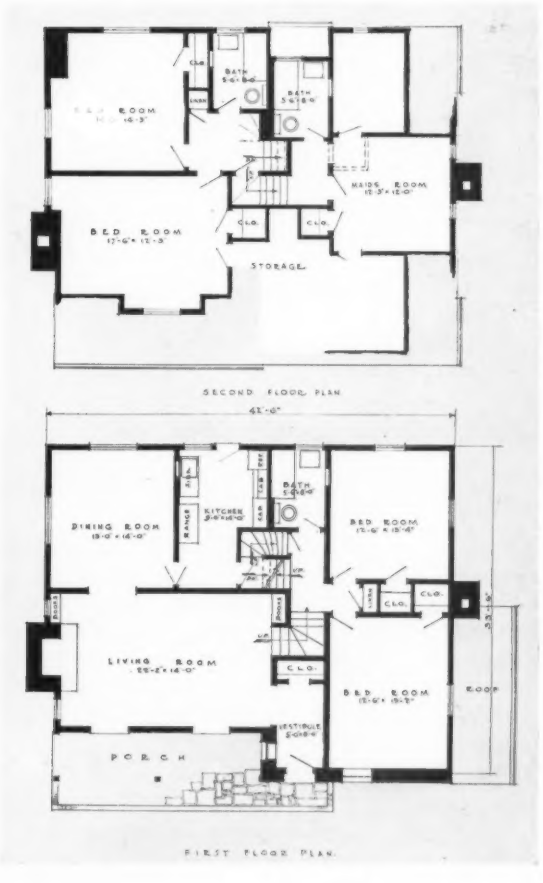




A DEVELOPMENT OF





BEAUTIFUL HOUSES . .

WHAT ARCHITECTS

Bronx Maternity Hospital, New York, to be erected at an estimated cost of one million dollars. Benjamin H. Whinston, architect

THAT CARELESS financing has slowed up house construction in New Jersey, it being at a standstill as the result of an "uncontrolled epidemic of cheap construction," is the opinion of C. V. R. Bogert, president of the New Jersey Chapter of the A. I. A. "Right now in New Jersey we find the confidence of the public in the building industry pretty badly shaken. Millions of dollars' worth of real estate is being carried on the books of financial institutions through foreclosures.

"In making loans on building operations a very important question is overlooked: 'Have your plans and specifications been prepared by a registered architect?' Such an inquiry would bring to light inflated values and poor construction before the loan is consummated and the building operation begun."

BECAUSE of the increasing number of grandstands which have collapsed, a national safety code to prevent their careless construction is being undertaken by a committee of the American Standards Association. Such action was requested by the Department of Labor and Industry of the State of Pennsylvania and other organizations.

DOUBLE-DECK ELEVATORS are planned for the new sixty-three story building to be erected by the Henry L. Doherty interests in New York City at a cost of $15,000,000. The architects are Clinton & Russell and Holton & George. This is said to be the first time double-deck elevators have been actually planned for.

Corbett Now Doctor of Laws

Careless Financing Ruins Residential Building

Residential Blocks 1,000 Feet Long

OLD BARONNE STREET, New Orleans, will have emerald green sidewalks, and Canal Street of that same city will have sidewalks of bright red. The Baronne Street Association has realized that the city becomes a trifle warm in summer, which perhaps accounts somewhat for dull business, and so is taking steps to relieve the intensity of the sun's glare with the thought that business will be stimulated thereby.

JAMES M. CURLEY, Mayor of Boston, is advocating a guarantee against strikes in the building industry as an important factor in carrying out the present program in that city to reduce unemployment and to stimulate industry. He pointed out that such an agreement during 1923 made possible the greatest building program ever fulfilled in that city.

HARVEY WILEY CORBETT has been given the degree of Doctor of Laws by the University of California in recognition of his services to the fine arts in this country and abroad.

A PRELIMINARY survey of architectural education will be made, beginning in the fall, by the Association of Collegiate Schools of Architecture and the Carnegie Corporation.

Brick arches built five thousand years ago and believed to be the oldest in existence. Discovered in a royal tomb at Ur, Mesopotamia, by the joint expedition of the University of Pennsylvania and the British Museum

ARE TALKING ABOUT

First Use of Double-deck Elevators

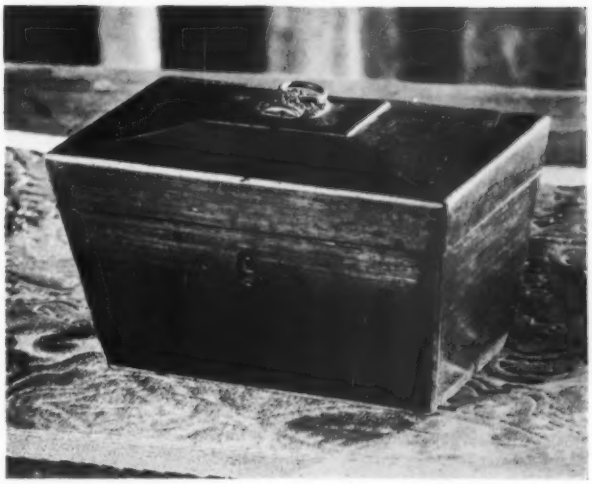
Architect's Wiring Specifications Behind Times

Guarantee Against Strikes Advocated

"WHEN an architect contributes to the building of one of these great monumental structures here in New York, and doesn't look forward and provide a capacity in his feeders, for example, that will be adequate to take care of the needs of the people who are going to inhabit that building, not today, but five years from now, he has failed in the responsibility and trust that has been put upon him," said Earl Whitehorn, president, Electrical Association of New York at the recent Architectural Lighting Conference held at the Westinghouse Lighting Institute, New York. "When an architect builds a building and doesn't put in a sufficient amount of outlets into an apartment house so that the standards of living five years from now will be satisfied, because five years from now people are going to be using more electrical equipment than they do today as a common necessity of living, then he has failed to have the courage to do a job that is built for progress."

"THE LAST RIVET has been driven. We, too, are glad." Thus read the sign on 44 Gramercy Park W., New York, when the steel work was finished.

Basket-grate, English, about 1780, *and now in the Metropolitan Museum of Art, New York. The screen is of tutenag, an alloy of copper, nickel and zinc imported from China. Possibly designed by the brothers Adam*



A box made of San Domingo mahogany about 1800 *and used as a container for East Indian tea. Taken from Philadelphia by horse drawn vehicle and canal through the Alleghany Mountains to Bellefonte, Pa., where it remained in the possession of the original Jackson family until recently*

"IN one very large city not far from here, a comparatively new $2,000,000 office building is lighted with 8 or 9-foot candles," said Lawrence W. Davis, general manager of the Association of Electragists, Internationale, at the recent Architectural Lighting Conference. "However, some of the most important tenants occupying a very large proportion of that office building would like to install lighting of about 30 to 40-foot candles but it has been impossible to do that because the re-wiring would cost at least $30,000. In a building of that character, in which an investment of $2,000,000 has already been made, that investment has already begun to suffer, because it would cost $30,000 to provide certain important tenants with sufficient copper to give them the increase in lighting that they want today, not five or ten years from now. We know that a normal investment in a commercial building should last about 20 years and it should be built and based upon that. Are we thinking ten years ahead?"

EFFORTS of the Illinois Society of Architects to have the word "architect" inserted in advertising intended to stimulate building in that territory have been successful. A campaign now in progress had mentioned the various building interests but had ignored the architect.

RESIDENTIAL BLOCKS one thousand feet or more long are recommended in a resolution adopted by the Board of Directors of the National Association of Real Estate Boards. The reasons given for this recommendation is that the use of automobiles has shortened block distances; fewer intersections would speed up traffic and lessen the number of accidents; a greater land area could be used for building purposes; and street lighting costs would be reduced (*Continued on page* 104)

RISERS and TREADS for STAIRS

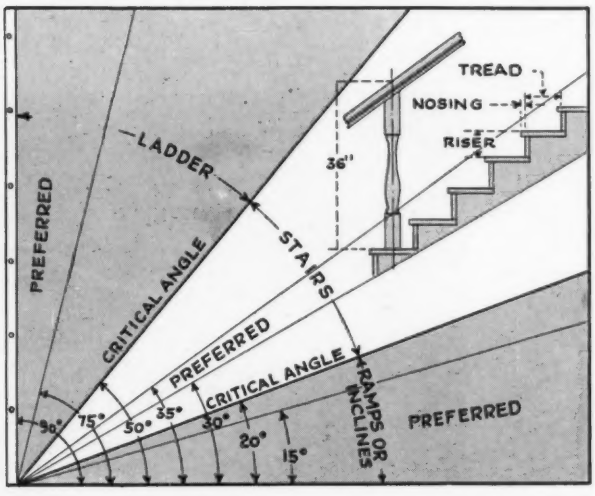


Table of Risers and Treads for Stairs

	ANGLE WITH HORIZONTAL	RISER IN INCHES	TREAD IN INCHES
	22°-00′	5	12½
	23°-14′	5¼	12¼
	24°-38′	5½	12
	26°-00′	5¾	11¾
	27°-33′	6	11½
	29°-03′	6¼	11¼
PREFERRED	30°-35′	6½	11
PREFERRED	32°-08′	6¾	10¾
PREFERRED	33°-41′	7	10½
PREFERRED	35°-16′	7¼	10¼
	36°-52′	7½	10
	38°-29′	7¾	9¾
	40°-08′	8	9½
	41°-44′	8¼	9¼
	43°-22′	8½	9
	45°-00′	8¾	8¾
	46°-38′	9	8½
	48°-16′	9¼	8¼
	49°-54′	9½	8

(*Tread + Riser = 17½″*)

Approved Standard, Workmen's Compensation Service Bureau, Safety Engineering Department

MATERIAL AND PROPORTIONS ARE BOTH FACTORS IN

Stair Safety

By H. Weaver Mowery

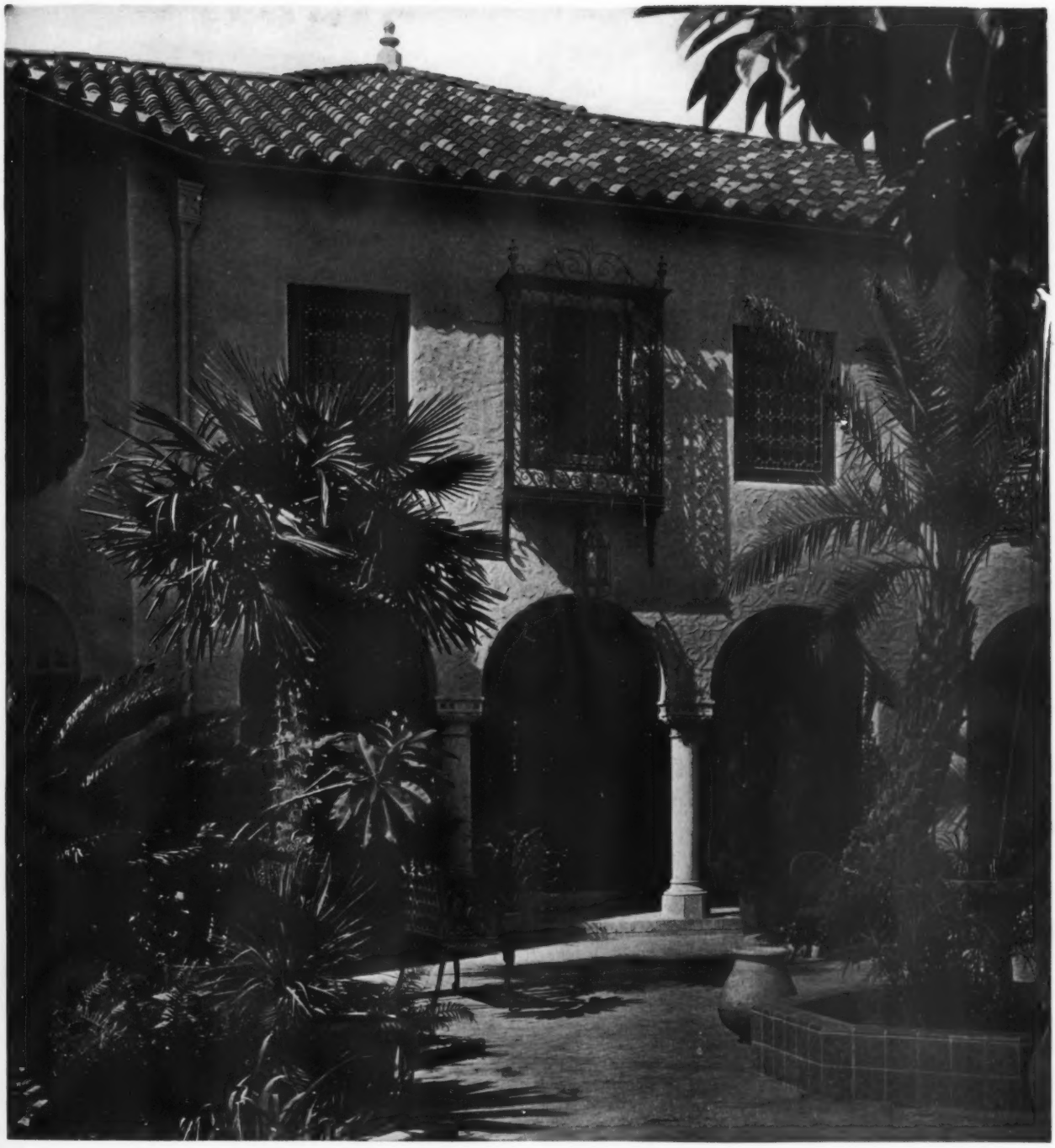
Past President American Society of Safety Engineers; Chairman, Safety Committee American Society of Mechanical Engineers

AMONG the various factors contributing to a safe stair the question of what constitutes proper tread and riser proportions, and angle with horizontal, is a source of much controversy. In the January 1930, issue of THE AMERICAN ARCHITECT there appeared an article by Mr. George Eichenlaub dealing almost exclusively with these details, but he proposes no conclusion, except that architects should be allowed to do as they please unhampered by any safety rules such as are in effect in the State of Pennsylvania and elsewhere. He specifically states that he does not "see how a rule or law can be devised for every conceivable condition of practice," and, to substantiate his position, he provides a list of 22 stairs with pitch, tread and riser dimensions and his judgment of them. Tabulating these items and setting in opposite columns possibilities which he regards as good and bad, provides at least an interesting exhibit of the variance in stair construction practice.

It should be noted that most of those stairs listed as "bad" by Mr. Eichenlaub also are far from being in harmony with the recommended safety standards developed, approved and published in 1914 under the direction of the Safety Engineering Department of the National Workmen's Compensation Service Bureau. And, of those listed as "good," the one he considers a "general ideal" is right in the middle of the "preferred" group of those standards as shown in the illustration at the top of this article. The 7-inch riser with 10½-inch tread, exclusive of overhang, is pretty generally recognized and used as a standard. The merit of this combination, the theoretical reasons for which are too well known to require detailing to the readers of an architectural publication, is substantiated by the wonderful safety record of the Times Square Subway Station discussed later. Therefore, it appears that the Pennsylvania standard is not only opposed to what Mr. Eichenlaub considers (*Continued on page 66*)

REARRANGED TABLE OF EICHENLAUB STAIRS WITH HIS COMMENTS

DEGREES	RISER	TREAD	COMMENT	DEGREES	RISER	TREAD	COMMENT
38½	7⅜	9	Quite ideal	38	7½	9½	Not recommended
34	7⅝	11	Practical limit	37½	8	10¼	Not good
33	7	10½	General ideal	37	8	10½	Hazardous
32	7½	11¾	Ideal for men	37	7	9	Not good
30	7	12	Very good	37	6½	9½	Bad
28	6¾	12½	An ideal	31	6¾	10¾	Sense of danger
26	6	12	An ideal	28	5¼	10½	Bad
24	6	13	Ideal inside	20	4½	12	Bad
23	6¼	13	Perfect ideal				
23	6	14	Ideal inside				



● Spanish tradition was closely followed by Architects Atlee B. and Robert M. Ayres in designing the residence of Dr. and Mrs. D. T. Atkinson at San Antonio, Texas. And IMPERIAL Mission Roofing Tiles played an important part in making it true to type. Above is a glimpse of the sunny patio, where the colorful roof contrasts picturesquely with tropical planting.

LUDOWICI-CELADON COMPANY

Makers of IMPERIAL Roofing Tiles

NEW YORK: 565 FIFTH AVENUE 104 S. MICHIGAN AVENUE, CHICAGO WASHINGTON: 738 FIFTEENTH ST., N. W.

ideal but is in accord with best and general standard practice.

It is generally admitted, and by the engineering department of the Pennsylvania Railroad it is required, that the height of risers and width of treads for stairways used by the traveling public, and where used jointly by the general public and employes, shall be the same for all stairways in any one building. Such a ruling is very desirable in the light of accident experience and, as it holds true for all stairways in any one building, it is equally obvious that the nearer we approach a given standard for all stairs everywhere, allowing only sufficient differences to provide for various floor heights at approximately the same angle, the more safely people will traverse them and the more desirable becomes the use of such standards.

IN spite of the great amount of discussion and numerous formulae that have been developed to determine them, tread and riser proportions, even if they do not accord with standard practice, are relatively unimportant as an accident cause as compared to unsafe tread materials and construction. This most insidious and most prolific source of stair accidents generally is not recognized as such and accordingly little effort has been made to overcome it.

There is a prevalent feeling that stair casualties, when they are not caused by easily noticeable hazards, are the result of pathological or other human deficiencies, such as vertigo, poor eyesight, impaired reflexes, relaxed muscular tissues, carelessness, high-heeled shoes.

A physician with over forty-five years of extensive practice is authority for the statement that our modern life is rapidly reducing the physical quality of our bodies. Our muscular and nervous reflexes are no longer as quick and accurate as they were when our very existence was dependent on them. The vast increase in the number of cases of enlarged tonsils is mute but incontrovertible evidence of our physical deterioration. Unquestionably, these and other human deficiencies exist, but are they sufficiently serious as a cause of stair casualties to excuse us from careful and honest consideration of the external causes for which the person injured has no responsibility. If it can be shown that external causes produce all or nearly all stair accidents, then the responsibility for them rests squarely upon the shoulders of the architect, builder, or owner, who designs, builds, or maintains the structure in such manner that those causes exist.

DURING the year ending June 30, 1929, in the Times Square Subway Station, there was an exposure of approximately 114,000,000 persons with only 115 reported accidents, and these were due to falls on stairs. Less than one-tenth of these resulted in injury; the total includes all reported falls including those where the individual immediately got up and walked away. Forty stairways and some considerable areas of horizontal walkway surfaces took care of this enormous traffic, unequalled elsewhere in such small area, with an exceptional degree of safety. A very careful inspection discloses no noticeable external physical hazards. Conditions are as safe as human ingenuity can devise. The stair risers measure 6⅞ inches and the treads 10⅝ inches exclusive of a ⅞ inch nosing overhang, which is in harmony with the 7 inch riser, 10½ inch tread "general ideal" of Mr. Eichenlaub and the recommended standard practice. The result, one accident per million separate exposures, under safe conditions of construction and maintenance, forcibly shows that human deficiencies are a negligible factor as a cause of falls.

Another illuminating example is that provided by a service test on the main stairway of an important railroad terminal. Observations were made during a period of six months. The exposure, though not definitely recorded, ordinarily would be considered quite large, though it is small in comparison to the Times Square Subway Station. During the first six weeks of the observation period, 141 falls occurred. Then the type of tread construction and materail was changed and there was not a single fall in the following three months during which observations were continued. A 14 inch tread, exclusive of 1¾ inch nosing overhang, in combination with a 6¼ inch rise, was not the proximate cause of the accidents that occurred in the first period of observation, as those dimensions remained unchanged after the accidents ceased. There were absolutely no changes except in tread material and the construction thereof. Numerous similar observations have been noted. It is, therefore, quite evident and undeniable that stair accidents are almost exclusively the result of hazardous or unsafe external physical conditions, because the absence or removal of such conditions results in the non-occurrence or cessation of the accidents. And, as in this case, the change in treads alone resulted in a cessation of the numerous accidents previously occurring, we are forced to admit that the item of paramount importance in stair safety is safe treads.

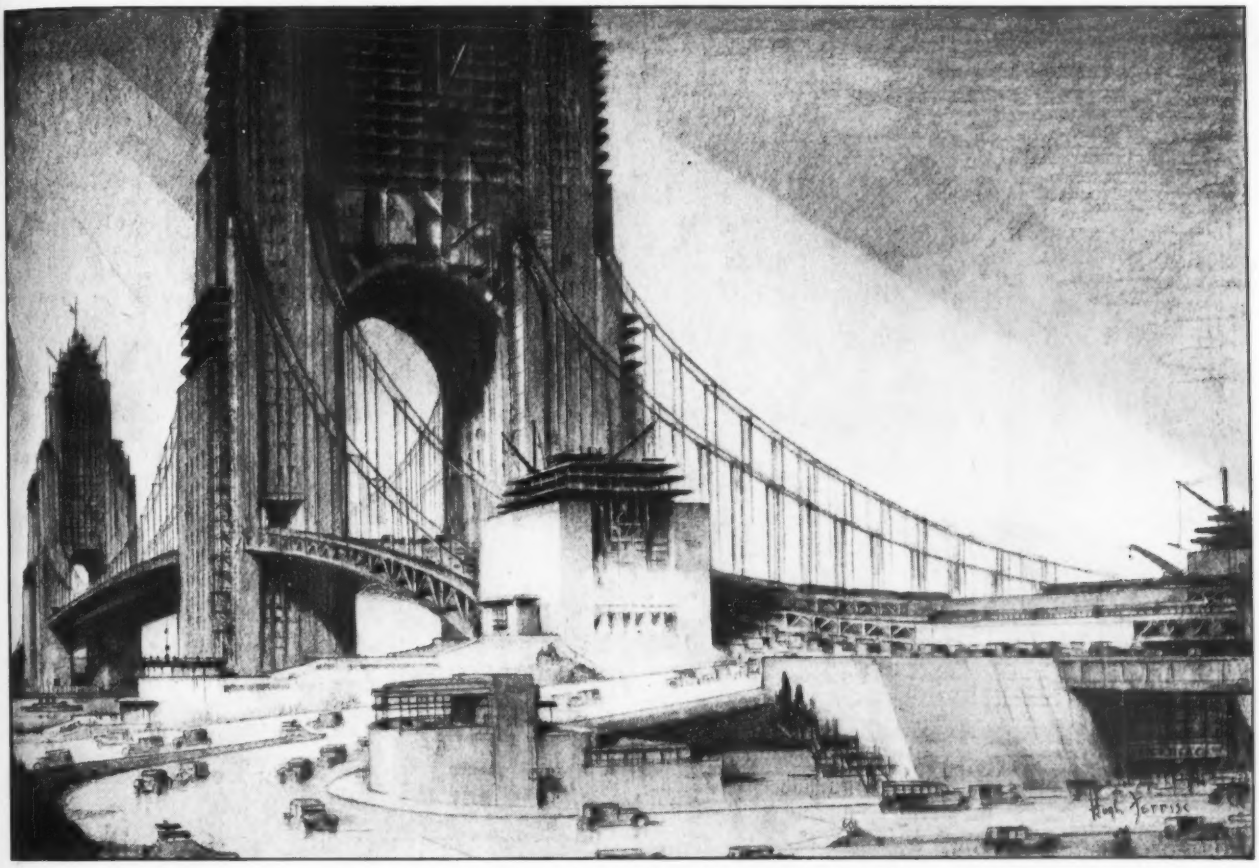
NOT all those treads commercially baptized "Safety Tread" are safe. In fact, some are decidedly unsafe. The celebrated case of Keiser vs. Milwaukee Boston Store clearly showed the menace of one such type which is composed of a metal base having a slippery metal nosing edge with a series of grooves parallel thereto filled with lead or abrasive cement composition and cost a heavy award affirmed by the Supreme Court of the State. Numerous service tests have confirmed the fact that such a "Safety Tread" is a decided hazard. In "Safe Practices," published by the National Safety Council, it is suggested that "ribbed surfaces or grooved material—should not be used for stair treads." The Pennsylvania Railroad and the Lackawanna Railroad standard stair construction rules prohibit the use of corrugated or ribbed treads, and it is noteworthy that their rules were promulgated after the above mentioned service test on stairs which at the start of the test were equipped with grooved "Safety Treads."

There are numerous types of stair tread materials in common use. Of course, nearly all materials can and do wear to a condition that eventually becomes unsafe. That is a question of maintenance and cannot be considered at this time. We are dealing here with the inherent qualities of the foot contact surfaces of treads when new and in a relatively unworn state.

It has been learned by sad experiences that iron and steel, even though the surface be rolled or cast with any of the numerous surface designs, are unsafe as stair treads because slipping on them is possible at all times after the shop scale or oxide is removed by even a little traffic. Iron and steel are condemned by the National Safety Council as unsafe (*Continued on page* 112)

STRUCTURAL STEEL CREATED THE SKYSCRAPER

STEEL NOT CRAMPED BY TRADITION



AN ENLARGEMENT OF THIS HUGH FERRISS RENDERING, ON SPECIAL STOCK FOR FRAMING, WILL BE MAILED WITHOUT CHARGE TO ANY ARCHITECT, ENGINEER, OR BUSINESS EXECUTIVE.

EACH leap is farther, every thrust higher . . . more and more defiant of the impossible become these spans and spires of steel. With increasing frequency, too, non-essential masks of weaker materials are eliminated—exposing the sincere, appropriate beauty of steel.

Most trustworthy and quickly applied of all structural materials, steel brings sooner occupancy—often extra revenues and added savings in interest charges. It brings speed, safety, and economy to the erection of small as well as large structures. In homes, apartment and mercantile houses, schools and small bridges, steel prevents shrinkage . . . facilitates alterations or removal.

Before building anything find out what steel can do for you. The Institute serves as a clearing house for technical and economic information on structural steel, and offers full and free co-operation in the use of such data to architects, engineers and all others interested.

The co-operative non-profit service organization of the structural steel industry of North America. Through its extensive test and research program, the Institute aims to establish the full facts regarding steel in relation to every type of construction. The Institute's many publications, covering every phase of steel construction, are available on request. Please address all inquiries to 200 Madison Avenue, New York City. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas and San Francisco.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

STEEL INSURES STRENGTH AND SECURITY

when OWNER over-rides architect's O. K. and REFUSES TO PAY

By George F. Kaiser

who specializes in the practice of law as it applies to real estate and building. The articles he writes for THE AMERICAN ARCHITECT *are founded on incidents of his daily practice. He is a graduate of the New York Law School and a member of the New York Bar*

WHAT HE DID. Bird & Holloway were eminent architects, outstanding leaders in the community where they practiced. When Beadle retained them and stipulated in the specifications, which were made part of his building contract, that they were to be the final arbiters of materials and workmanship, that was just a usual incident to Bird & Holloway. Bennett, the contractor, however, sued Beadle for the balance due him for the demolition and reconstruction of an office building, which work had been done under the direction and supervision of Bird & Holloway. Beadle defended the suit on a claim of defective workmanship and materials, and a demand that Bennett should demolish certain work already completed, although it had been approved by Bird & Holloway as architects in charge. "How can he repudiate our honest decision," the architects asked their counsel, as Beadle allowed the suit instituted by the contractor to come up for trial.

WHY HE DID IT. Of course, the owner knew that he had appointed the architects sole judges of the materials and workmanship, but he was willing to repudiate their decision if such action should profit him materially in any way.

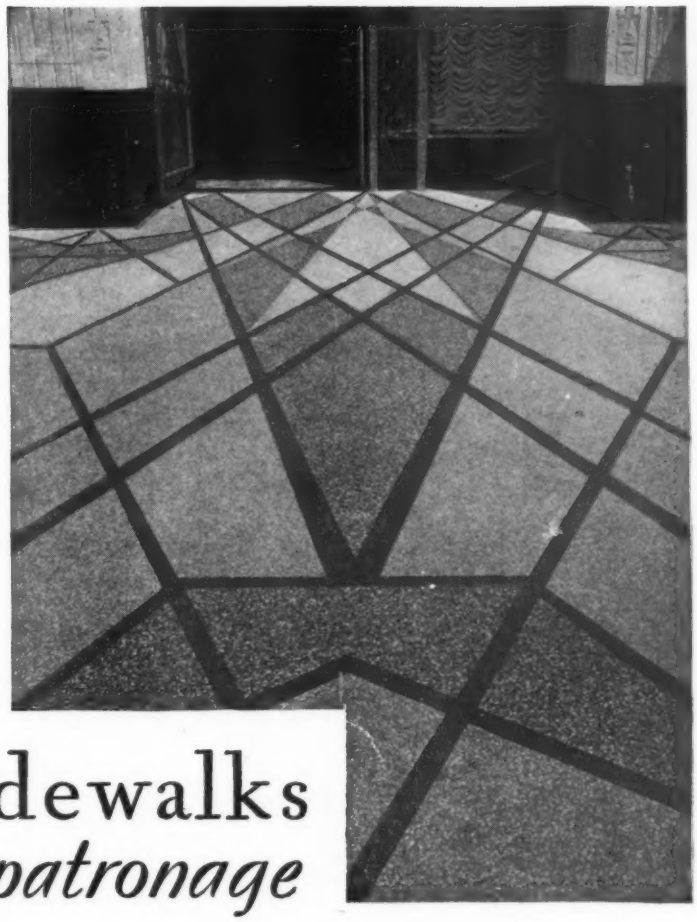
WHY HE SHOULDN'T HAVE DONE IT. When it is stipulated in specifications which are made part of a building contract that, "Should any dispute arise as to the quality or fitness of the materials or workmanship, the decision shall rest strictly with the architect," and where such a decision forms the basis of a suit between the parties to such stipulation, the architect's findings as against doubtful evidence are invariably upheld by the courts. If an owner does not honestly wish to be bound by his architect's findings or decision in such a case, he should not enter into such a stipulation. Having entered into it, he cannot avoid it, unless the decision of the architect is arbitrary and plainly contrary to the evidence.

PAYMENT for UNCOMPLETED PLANS and SPECIFICATIONS

WHAT HE DID. When Hayes & Hewlett, and Bedell, who owned several large lots in the residential district, entered into their contract, it was provided that Hayes & Hewlett were to act as architects in drawing plans and specifications, that they were to finance and superintend the construction, and were to obtain bids on a large apartment house to be erected on Bedell's lots. It was also provided that the plans and specifications to be drawn were to be satisfactory to the owner, Bedell. The architects went ahead and prepared plans and specifications and made their arrangements for financing the building, etc., when Bedell suddenly ordered all work discontinued, and refused to pay the architects for their services. The latter brought suit for their commissions, claiming that Bedell had discontinued the project fraudulently and in bad faith. Bedell, defending the action, insisted that he had discontinued because the plans and specifications were not "satisfactory" to him.

WHY HE DID IT. Bedell wanted to avoid his obligation to the architects, and wasn't particular what means he used to evade it.

WHY HE SHOULDN'T HAVE DONE IT. The Court, in a similar case, said, "The purpose of the undertaking was to get an apartment house built on the owner's land without original cost to him excepting the land itself. He was, of course, interested in the architectural design of the building, its general plan, its size, the approximate cost, and the materials to be used. But after these general preliminaries were agreed upon, as they were in this case, and when the plans and specifications had been completed to the owner's satisfaction, we cannot agree that the defendant would then have the right to arbitrarily halt the work being done under the contract because of alleged dissatisfaction with it, particularly if the dissatisfaction did not in fact exist and was not urged by him in good faith."



Portland cement concrete sidewalks surrounding the Wilshire Professional Building, Los Angeles. Arthur E. Harvey, Los Angeles, Architect.

Sidewalks *which invite patronage*

Sidewalks are playing a new role. They are helping business set the stage for sales, by providing an attractive approach to the shops they border. The patterns illustrated on this page were carried out in terrazzo, one of the specially finished forms of portland cement concrete. The result is really an extension of the lobby floors to the pedestrian area outside — an invitation to enter the building and its shops.

Each day concrete assumes new importance in the realm of business. Its fire-safety affords protection alike to lives and property. It contributes a substantial and enduring beauty to the architecture of smart shop and towering department store. It helps create favorable comment. In building and surroundings, *concrete sets a magnificent stage for sales!*

Sidewalk patterns—new and different—may be produced at somewhat less expense than the fine terrazzo here pictured, by mixing suitable mineral colors in the concrete.

PORTLAND CEMENT *Association*

Concrete for Permanence and Firesafety

33 WEST GRAND AVENUE
CHICAGO

THE READERS Have a Word to Say

• ABOUT A.I.A. COMPETITIONS

Editor, THE AMERICAN ARCHITECT:

IN your May editorial, "The Competition Problem," I believe you indicate undue confidence in A. I. A. approved competitions. For instance, three of the five jurors for the George Rogers Clark competition were members of the Sesquicentennial Commission; in other words, the award of this A. I. A. approved competition was controlled by the owners in the same manner that the school competition which you criticize is to be controlled by the school board. In fact, I think the school competition you speak of is a fairer proposition for an architect, because the tone of the jury is evident at the start, whereas in the Clark jury we had reason to expect a free and competent jury of some kind, and didn't get it. The result of the Clark Award is far more damaging to the architectural welfare of this country than any miscarried school building award could possibly be.

Where has an A. I. A. approved competition ever made possible the execution of a noteworthy building of American creation, and if it has not helped in this direction, what good is the service?—*John Floyd Wright, architect, Michigan City, Ind.*

• EX-PRESIDENT TAFT AND THE ARCHITECTS

Editor, THE AMERICAN ARCHITECT:

I NOTICE that you are running a lot of little personal incidents in lighter vein, which seem to me to be very interesting to your readers. I have enjoyed telling the following little tale about Mr. Taft and thought others might enjoy reading it:

Since the recent passing of our much beloved Ex-President Taft, many little tales about him have been told for the first time. Here is one which illustrates his delicious sense of humor and his love of a joke—the joke, however, was rather more on the architects involved than on Mr. Taft.

It so happened that we had completed an auditorium building at a certain institution of learning, and my partner and myself had made the trip from New York to be present at the dedication, anxious to hear the words of praise which an appreciative public always bestows on the architect. By the personal eoniums of some of our most intimate friends, our expectancy of the delightful public recognition we were about to receive was raised to a high pitch and we are complacently reflecting on the great value of public recognition of merit.

Presiding at the dedication exercises was a relative of my partner, and feeling that it might savor of nepotism should he draw attention to the architects, he graciously paid tribute to the contractors—their splendid organization — their rapid work, and the superlative quality of their workmanship—leaving to succeeding speakers expression of appreciation of the work of the creators of the building.

But as this job of taking care of the "creators" had not been definitely assigned, the succeeding speakers, perhaps thinking that it was not usual to mention the architect any more than the plumber, for instance, or perhaps thinking that the building had "just growed" like Topsy, without any special plan or specification of development, or perhaps just speaking without thinking at all—at any rate, none of these speakers even mentioned the names of the architects, and so the ceremony passed off pleasantly.

It happened, however, that there was on the Board of Trustees, of which Mr. Taft was president, an architect of reputation by the name of Mr. T———. He took Mr. Taft aside after the ceremony and told him of the omission of the architect's name, suggesting that at the afternoon ceremony, over which Mr. Taft was to preside, it would be courteous to have the architects' names mentioned.

In the afternoon, therefore, Mr. Taft arose on the platform, and called the attention of the audience to ". . . the great beauty and comfort of this splendid auditorium, to its fine proportions, harmony of color, and truly remarkable acoustics. Now," he said, "I want you all to know that the credit for this great work of art is due to the architect, and that the architect is Mr T———."

There was a slight pause, sufficient at least for two persons in the audience to succumb to a stroke of apoplexy. Then someone on the stage pulled Mr. Taft's coat tails from behind. Mr. Taft bent over toward the puller, listened a moment, and then turned back to the audience with that wonderfully expansive smile of his, expanded far beyond all former records, and with three or four little Taft chuckles, proceeded: "Ladies and gentlemen, I want you all to know that this building was designed by Ludlow & Peabody, and that it was Mr. T——— who told me to say this."—*William Orr Ludlow, Ludlow & Peabody, architects, New York.*

• MORE ABOUT DANGEROUS LOCKS

Editor, The American Architect:

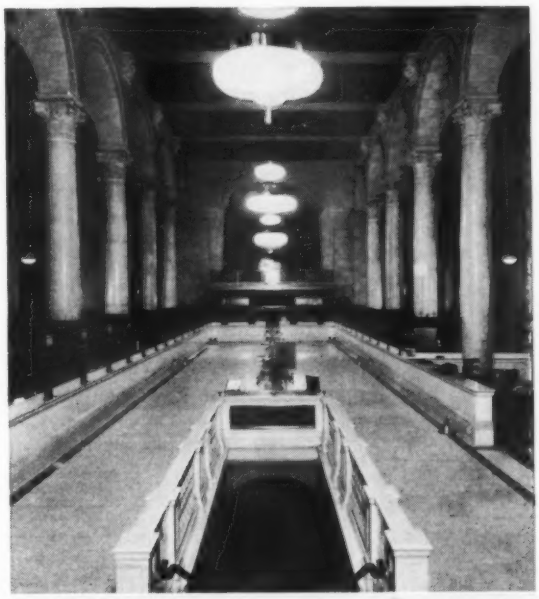
IN your May issue in the columns entitled, "As it looks to the Editors," I find your paragraph on "Dangerous Locks" a very interesting one to me inasmuch as it is a subject that I have been studying for about two years and I have developed a type of lock that does not have a lip on the strike plate which you call attention to as being a nuisance. In addition the latch portion of the lock does not project when the door is standing open and form the same nuisance in (*Continued on page* 98)

WIRING FOR PRESENT AND FUTURE DEMANDS

solves bank illumination problems

by R. S. GREGG, A. I. A.

of Hewitt, Emerson & Gregg, Peoria, Illinois



This attractively lighted banking room in the Commercial National Bank of Peoria, Ill. meets today's requirements with a wiring installation that can easily take care of increased future needs.

IN the new Commercial National Bank Building in Peoria, Illinois, the future requirements for electrical service were considered as one of the most important factors in insuring against early obsolescence. On the banking floor greater development in the use of electrical accounting equipment or growth calling for increased personnel was to be expected. On the upper floors, devoted to office space, the probability of new buildings which might encroach on the natural lighting now available had to be taken into account. Subdivisions of a kind that are not needed today are also a possibility. Even without these factors there is a trend toward the use of more light which must be considered.

It seemed logical to look to the local electric service company for information by which to gauge this future demand. Their knowledge of the trend toward the increased use of electricity and their experience with inadequate electric service in buildings only a few years old helped in reaching a practical, reasonable and economic basis for wiring and lighting specifications. The wiring and lighting bureau of the service company co-operated in every part of the electrical layout, supplying advice and information that pointed to the advisability of wiring this 11-story building to supply 4½ watts per square foot on the banking floor and 4 watts per square foot on the office floors. Number 12 circuits are used throughout, and oversized conduit makes it possible to draw an additional circuit into each bay whenever it may be needed.

On the basis of our experience, checked against the information which the lighting service bureau has made available, we feel certain that this building will meet any increased electrical demands that may reasonably be expected during its period of usefulness.

For information about trends in lighting standards and about adequate wiring, call on the wiring bureau of your local electrical service company or write direct.

NATIONAL ELECTRIC LIGHT ASSOCIATION, 420 LEXINGTON AVENUE, NEW YORK

FRANK E. WALLIS

F.A.I.A.

An Historical Appreciation

by

J. A. SCHWEINFURTH
Architect, Boston, Mass.

FRANK E. WALLIS was born in Eastport, Maine, June 14, 1862, and lived and worked in his earlier life in Boston. His earliest training in architectural work was in the offices of Cabot and Chandler, one of the leading architectural firms of their day.

He was always a very earnest hard working student, and with his years his enthusiasm and industry grew, rather than abated.

Always a lover of colonial architecture, he became an authority on the work of this period in New England, and extended his studies to that of Maryland and Virginia, making many drawings and sketches of this work which were published from time to time in THE AMERICAN ARCHITECT, and in several cases published in book form. To Frank Wallis, the late Arthur Little and Robert Swain Peabody, all of Boston, it may be said is due the credit of being the pioneers in the cult of colonial architecture in this country, and to this group is due the appreciation and development of this work, down to the present day.

In 1886 he travelled extensively in Europe and became thoroughly saturated with the love of the architecture he studied in Spain, Italy, and England, where he made many sketches. As he was always a very facile and clever draftsman, these sketches, although unknown to many, were among the best ever made by an American architectural student, while travelling, up to that time.

On his return from abroad to New York in 1886, he practiced architecture for a time, and later accepted a position with the late R. M. Hunt, whom he admired and loved, and for whom he worked with his usual enthusiasm for some years.

Later he started practice in New York. During all this time he did much important work in New York City and its suburbs, and some notably beautiful domestic work in Montclair, N. J.

His most important commission was that of the splendid group of buildings at Nela Park, Cleveland, which extended over a period of about ten years. With characteristic fervor he always spoke of this work as the most wonderful commission an architect ever had.

For the last few years he had practically retired, living in Paris with his wife, from which center they made happy tours over the Europe of their dreams. He contributed to various architectural journals, notably THE AMERICAN ARCHITECT and was the author of "How To Know Architecture," a book which met with great success, for it enabled people to understand what architecture really was so that they could, in a measure, enjoy it as they did the other Fine Arts such as music, painting, etc., which have always been better understood by the public than architecture.

He had been working on a "History of the Guilds of the Thirteenth Century in France," in their relation to art and architecture in particular, and had collected a great deal of material and an interesting library of original sources for this work which, had he lived to complete it, would have added to his literary fame; for it certainly is a fascinating study for one coming under the spell of the art work of this period.

But unfortunately the completion of this work was not to be. After some months of illness in the American Hospital in Paris his brave soul passed on, March 21, 1929—and his mortal remains are interred in Pere La Chaise Cemetery, Paris.

TO those who were privileged to know Frank Wallis intimately, they will ever remember him with affection and admiration for his indomitable courage, his optimism and his enthusiastic love for, and his pride in, his profession. He was very inspiring to the young student to whom he was always glad to be helpful, and he gave confidence to his circle of kind and appreciative clients. They will remember his beautiful drawings and sketches, and that his writing showed he was a master of the pen as well as the pencil and the brush, that his long arduous life, accompanied with many difficulties which he bravely overcame, richly entitled him to his title of Fellow of the American Institute of Architects, and all the honors and emoluments he received in so great measure, and to that rest from his labor in the soil of France, that country he loved so well.

ONLY the "Manhattan" has ALL these features!

Compare this bath fixture with the one you're now specifying—and we'll leave it to you which has the better chance to be selected by builders and owners in your city.

The "Manhattan" has (1) a new removable shower face plate that comes off by loosening a center screw. (2) Only two valves are required—each with a standardized removable unit, accessible from the face of the wall. (3) A 1-piece fitting for 6-inch centers. (4) An automatic diverter in the spout—no rubber, no spring — cleverly designed to prevent scalding and unexpected showers. (5) A mechanical waste with the stopper in the tub outlet—no need to get at it from behind.

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No Rubber—No Spring

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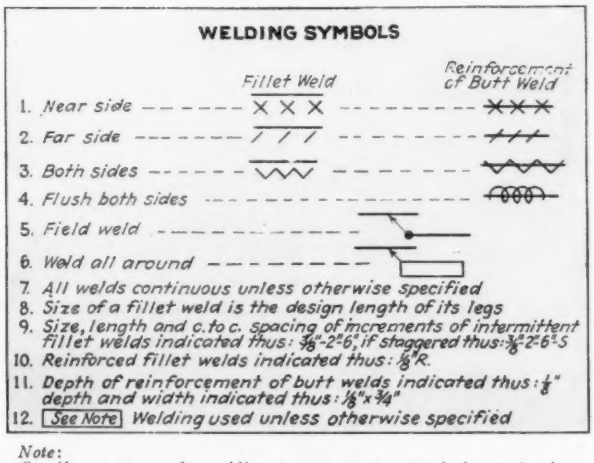
CHICAGO FAUCETS

WELDING SYMBOLS

for structural work

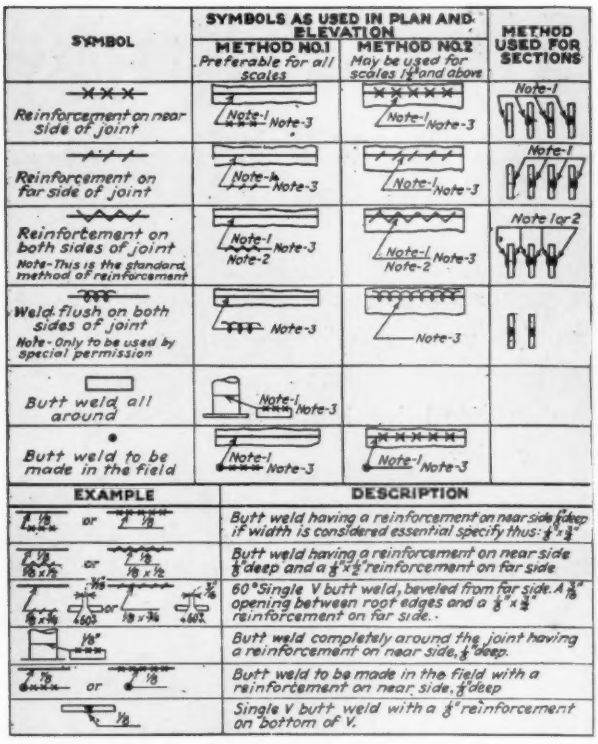
THE rapid increase in the use of welding instead of riveting for structural work is making it necessary for the architect and draughtsman to be familiar with the conventional symbols used in that process. These symbols are given in a recent bulletin published by the American Welding Society, which contains the report of the Society's committee on nomenclature, definitions and symbols.

The illustrations reproduced on this page are taken from that part of the bulletin concerned with fusion welding, which is the type applying directly to structural work. Other sections of the bulletin, which may be obtained from the American Welding Society, New York, for fifty cents, include the names of the principal welding processes and a diagram illustrating their interrelation, definitions and abbreviations.


WELDING SYMBOLS
Fillet Weld
Reinforcement of Butt Weld
1. Near side
2. Far side
3. Both sides
4. Flush both sides
5. Field weld
6. Weld all around
7. All welds continuous unless otherwise specified
8. Size of a fillet weld is the design length of its legs
9. Size, length and c. to c. spacing of increments of intermittent fillet welds indicated thus: 3/8"-2"-6", if staggered thus: 3/8"-2"-6"-S
10. Reinforced fillet welds indicated thus: 1/8"R.
11. Depth of reinforcement of butt welds indicated thus: 1/8" depth and width indicated thus: 1/8"x3/4"
12. See Note Welding used unless otherwise specified

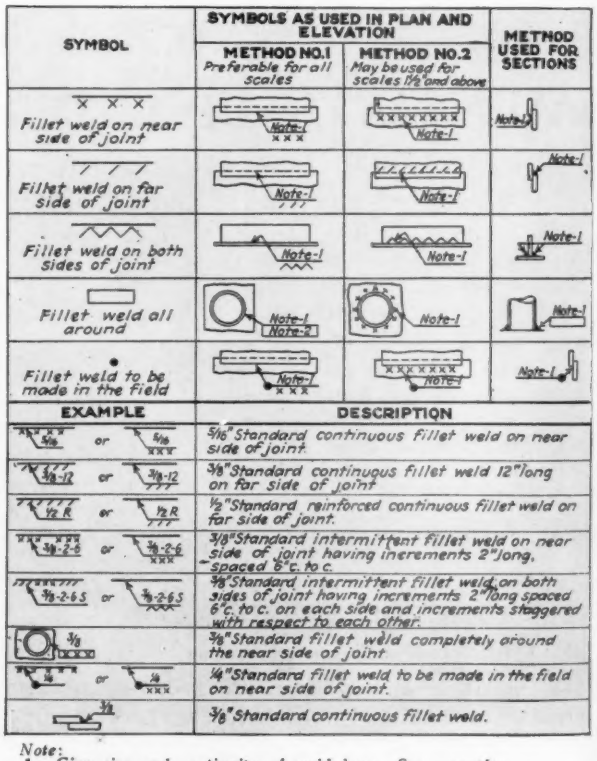
Note:
Specify on stamp the welding process most extensively used, viz.: metal arc, gas, etc.

A form of rubber stamp showing welded details, to be used on drawings


SYMBOL
SYMBOLS AS USED IN PLAN AND ELEVATION
METHOD NO.1 Preferable for all scales
METHOD NO.2 May be used for scales 1½" and above
METHOD USED FOR SECTIONS
Reinforcement on near side of joint
Reinforcement on far side of joint
Reinforcement on both sides of joint
Note-This is the standard method of reinforcement
Weld flush on both sides of joint
Note-Only to be used by special permission
Butt weld all around
Butt weld to be made in the field
EXAMPLE
DESCRIPTION
Butt weld having a reinforcement on near side ⅛" deep if width is considered essential specify thus: ⅛"x½"
Butt weld having a reinforcement on near side ⅛" deep and a ⅛"x½" reinforcement on far side
60° Single V butt weld, beveled from far side. A 1/16" opening between root edges and a ⅛"x½" reinforcement on far side.
Butt weld completely around the joint having a reinforcement on near side, ⅛" deep.
Butt weld to be made in the field with a reinforcement on near side, ⅛" deep
Single V butt weld with a ⅛" reinforcement on bottom of V.

Note:
1. *Give size of reinforcement in terms of depth, or depth and width.*
2. *Give size of reinforcement on far side here, if different from size of reinforcement on near side.*
3. *Make free-hand sketch of joint here if shape of joint edges, spacing of root edges and side from which beveled is not obvious. The upper side of the sketch will be understood as the near side.*

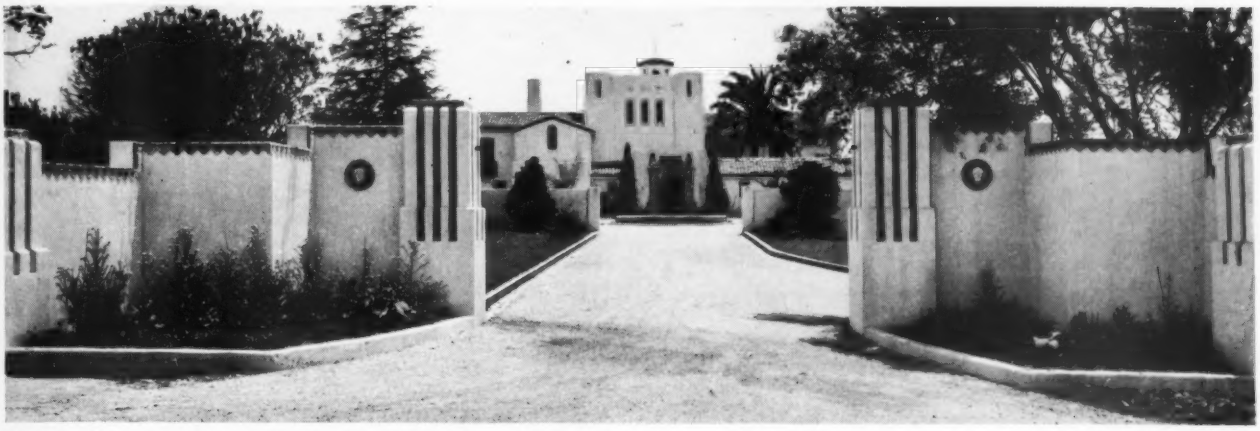
BUTT WELDS


SYMBOL
SYMBOLS AS USED IN PLAN AND ELEVATION
METHOD NO.1 Preferable for all scales
METHOD NO.2 May be used for scales 1½" and above
METHOD USED FOR SECTIONS
Fillet weld on near side of joint
Fillet weld on far side of joint
Fillet weld on both sides of joint
Fillet weld all around
Fillet weld to be made in the field
EXAMPLE
DESCRIPTION
5/16" Standard continuous fillet weld on near side of joint.
⅜" Standard continuous fillet weld 12" long on far side of joint
½" Standard reinforced continuous fillet weld on far side of joint.
⅜" Standard intermittent fillet weld on near side of joint having increments 2" long, spaced 6" c. to c.
⅜" Standard intermittent fillet weld on both sides of joint having increments 2" long spaced 6" c. to c. on each side and increments staggered with respect to each other.
⅜" Standard fillet weld completely around the near side of joint
¼" Standard fillet weld to be made in the field on near side of joint.
⅜" Standard continuous fillet weld.

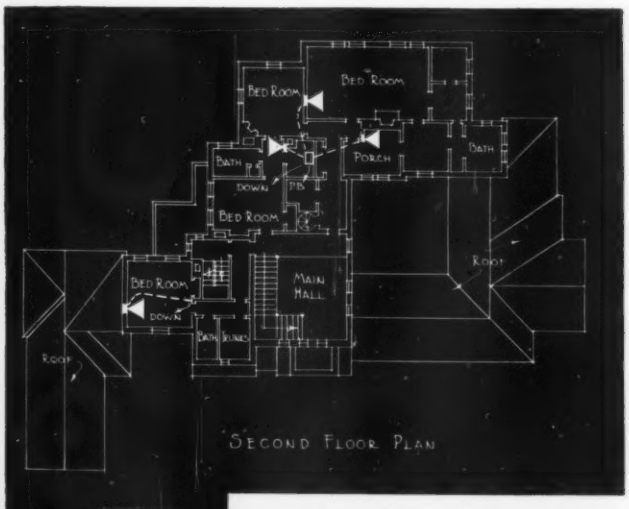
Note:
1. *Give size and continuity of weld here. See examples.*
2. *Show symbol for location here. See example.*

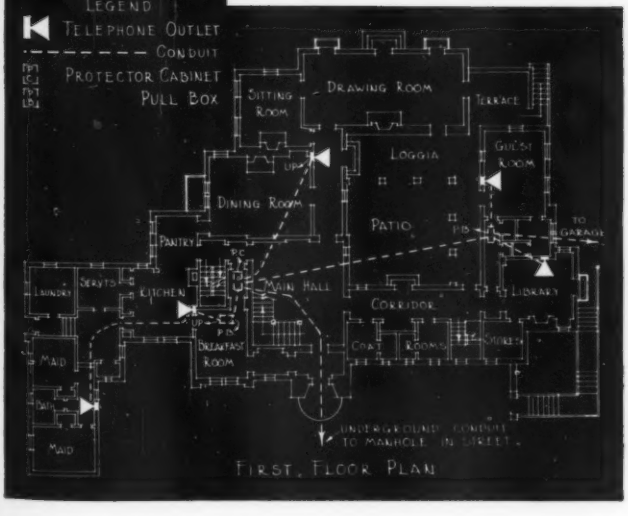
FILLET WELDS

Telephone Convenience adds to the Individuality of a Residence



Complete telephone convenience is provided for in the residence of Mr. Francis Whitaker, 1155 Angelo Drive, Los Angeles, Cal., by ten telephone outlets, including one in the garage. Conduit within the walls and floors carries the wiring for the telephone system which will include inter-communicating features.
CARLETON M. WINSLOW, Architect, *Los Angeles.*





CERTAIN things contribute to the effectiveness of the well-designed home: its beauty . . . excellence of materials . . . other carefully chosen features which assure the comfort of those who live in it. The achievement of complete convenience, so essential to modern life, is increasingly claiming the attention of architects in every part of the country. And a considerable part of this attention is being directed to *telephone convenience.*

Many people who move into new homes, or who have their residences remodeled, desire to have telephones in all the important rooms. They realize how many steps and how much time this will save. And architects are meeting this modern need by planning for the telephone arrangements in advance of construction, and specifying conduit to all locations where telephone outlets may be desired. The home owner can then use just those outlets which best meet his requirements, and he can enjoy the improved appearance which comes from concealed wiring.

Representatives of the local Bell Company will gladly confer with you and your clients relative to appropriate locations for telephones. There is no charge. Just call the Business Office.

NEW MATERIALS & EQUIPMENT

BRIEF REVIEWS THAT MAKE IT EASY
TO KEEP IN TOUCH WITH THE
PROGRESS MADE BY PRODUCERS

Electric Refrigerator and Range Combined

An electric refrigerator and range combined especially for apartment house kitchenettes has been placed on the market by the Frigidaire Corporation, Dayton, Ohio. It occupies a trifle more than four square feet of floor space, width is 26½ inches, depth is 23 inches, and height is 55¼ inches. Range and refrigerator are separated by three inches of special insulation. The range is finished in gray and white porcelain. The refrigerator is finished either in cream-white duco or gray and white porcelain on steel; it has a food capacity of three cubic feet and a shelf space of five and a half square feet with two ice trays.

Textured Structural Tile

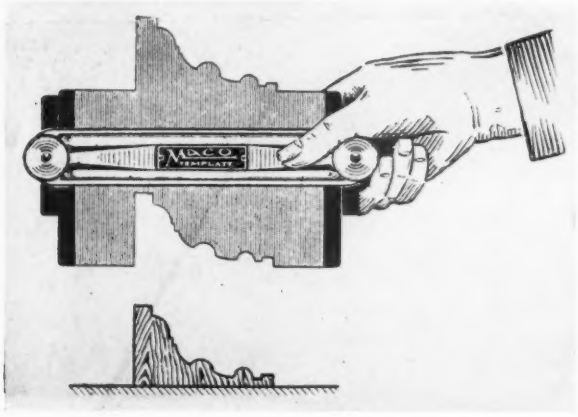
Two new textures of structural tile have been announced by the Clay Products Company, Inc., Brazil, Ind. One is described as a cream-buff stippled tile and the other is called Insul-Glas. Both are additions to the Ar-ke-tex tile line of this company. They are for use in either exterior or interior walls.

Unit Heater

A sixteen inch Twin Breezo-Fan Unit Heater has been placed on the market by the Buffalo Forge Company, Buffalo, N. Y. When desired, one of the fans may be shut down, thus lowering the steam consumption and reducing the temperature.

Flintcraft Tiles

Flintcraft Tiles are a machine-made faience recently placed on the market by the Flint Faience & Tile Co., Flint, Mich. They are hand dipped with the same glazes and fired in the same kilns as Flint Faience handmade tiles. Furnished in ten colors. Suitable for inside or outside use.



Taking Profile of Details

A template that is so constructed as to make it possible to take a profile of anything from an elaborate piece of architectural design to the most intricate casting has been introduced into this country from Great Britain by the American Maco Template Co., Inc., 44 Whitehall Street, New York City. It is composed of a number of fine brass strips. When the template is pressed against a moulding, for instance, it takes the profile of the moulding. The template is then locked to keep this profile until it is desired to take the profile of another moulding.

Incinerator With No Supplementary Fuel

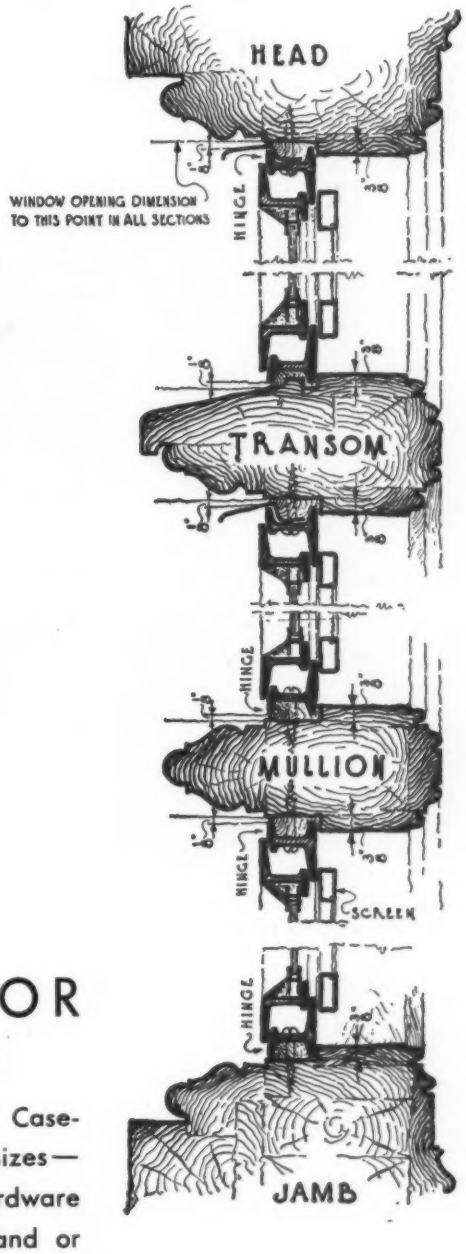
An incinerator that requires no special fuel has been placed on the market by the General Incinerator Company, Alliance, Ohio. It has a combustion chamber which provides for constant air circulation which dries the moisture in the garbage and makes it a semi-fuel. Down-draft is induced, so that burning is from the top down. It is said to be merely necessary to light the garbage with a match and to let it burn without attention. Ashes are removed at infrequent intervals. Requires a flue connection. Has a capacity of two bushels, a height of 32 inches, and a diameter of 21 inches.

New Type Oil Burner

Model E, a new type oil burner for small houses, has been brought out by the Silent Automatic Corporation, Detroit, Mich. It is built for either round or rectangular furnaces, and has a maximum oil flow of one and a half gallons per hour.

New Type of Terra Cotta

A new type of Terra Cotta has been announced by the Atlantic Terra Cotta Company, 19 West 44th street, New York. It is particularly adapted for interior walls and is mechanically made to standard sizes adjustable to requirements. These units are also suitable for exterior use. Cove base pieces, cap pieces and miters are also made in these standard units. It comes in many colors and textures. An advantage is that in addition to supplying a wall surface the units also form a structural part of the walls.



SECTIONS THAT FAVOR LEADED GLAZING

In the hands of the architect Fenestra "Fencraft" Casements have unlimited possibilities. Available in many sizes—Used singly or in attractive groupings—Choice of hardware in solid bronze or nickel silver, Coinage, Scaly, Sand or Hammered finish—Designed with or without bronze screens—Heavy, sherardized hinges fitted with 100% bronze bearings.

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ARCHITECTURE
ALLIED ARTS

BOOKS

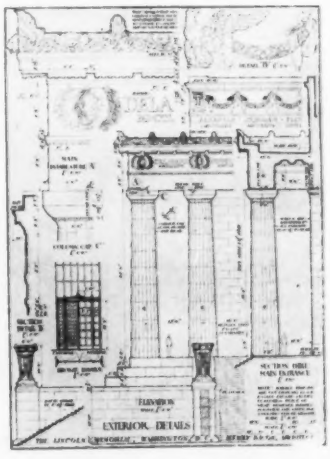
ENGINEERING
BUSINESS ECONOMICS

Detail of entablature, Lincoln Memorial, Henry Bacon, architect. From "Masterpieces of Architecture in the United States"

Masterpieces of Architecture in the United States

By Edward W. Hoak and Willis H. Church. Published by Charles Scribner's Sons, New York. Illustrated: 225 pages; size 13 x 17¼; price $20.

THIS is an exceptionally fine presentation in pictures and measured drawings of eighteen of the leading buildings completed during recent years in the United States. The buildings were selected by a jury of eleven architects which included Chester H. Aldrich, Harvey Wiley Corbett, Ralph Adams Cram, William Rutherford Mead, Raymond M. Hood, William Mitchell Kendall, H. Van Buren Magonigle, Paul P. Cret, Ralph T. Walker, Harry Sternfeld, and the late Milton B. Medary. The buildings were measured and drawn by Edward Warren Hoak. M. Ar., winner of the John Stewardson Memorial Traveling Scholarship, 1926, and Willis Humphry Church, A.B., B. Ar.

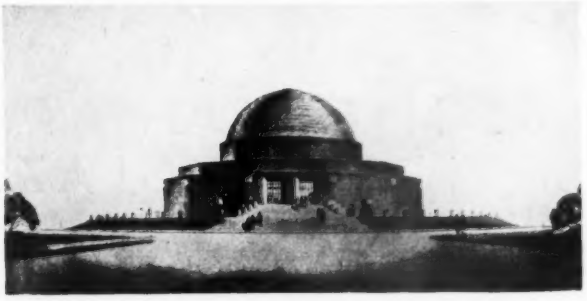


Page of measured drawings of the Lincoln Memorial. From "Masterpieces of Architecture in the United States"

The manner of presentation makes use of interior and exterior photographs faced by measured drawings with frequent notation on the materials used. The selection of details illustrated is excellent, and the book all the way through shows an intelligent handling of the presentation of the buildings selected.

These buildings include the Lincoln Memorial, the Liberty Memorial at Kansas City, the Detroit Institute of Arts, the Building for the Freer Collection, the Boston Public Library, Indianapolis Public Library Building, Detroit Public Library, Church of St. Vincent Ferrer, Madison Square Presbyterian Church, Nebraska State Capitol, Pan-American Union Building, Temple of the Scottish Rite at Washington, Shelton Hotel at New York, Hotel Traymore, Barclay-Vesey Building, Bush Building, Chicago Tribune Tower, and the Woolworth Building.

Each of these buildings is preceeded by a page or more of comment written either by the architect or prepared under his supervision.



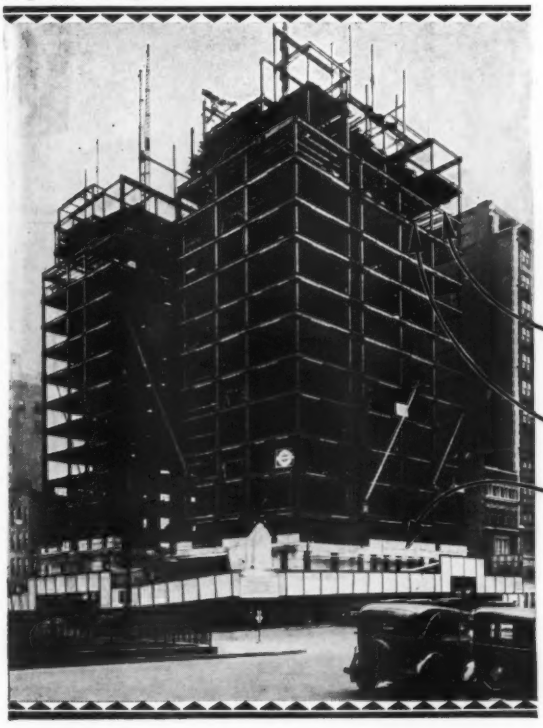
Adler Planetarium, Chicago, Ernest A. Grunsfeld, Jr., architect. From "Living Architecture"

Living Architecture

Edited by Arthur Woltersdorf, F.A.I.A. Published by A. Kroch, Chicago. Illustrated; 178 pages; size 7½ x 11; price $4.50.

HERE is a book that will prove interesting to the architectural profession for two reasons. First, because it is a compilation of the material gathered by the Public Information Committee of the Chicago Chapter of the A. I. A. for presentation to the public through Chicago newspapers, and may therefore be taken as a guide by other architectural societies interested in public education on architecture. Second, because in itself it is an interesting book containing the ideas of prominent architects on buildings of a type in which they have respectively specialized. It constitutes an authorative discussion of present day problems, being a collection of

Lange & Noska, Engineers



Photograph of 895 Park Avenue, New York, under construction by Thomas O'Reilly & Son, Inc. with

GYPSTEEL
Pre-Cast Floors and Ceilings

1. Steel being bolted.
2. Steel riveted to here and Gypsteel Floors installed.
3. Stone work started.

Right on the heels of the Steel came the GYPSTEEL Floors—

WHEN the 20-story apartment house at 895 Park Avenue, New York City, was built from plans by Sloan & Robertson, Gypsteel Pre-Cast Floor and Ceiling construction was used. Experienced architects and builders were deeply impressed with its remarkable speed of installation, which made it possible to complete each floor a day or so after the steel was riveted.

Note that in the above photograph of this building under construction, every floor has been completed right up to where the steel is ready for it. You see no forms because none are used. Just as soon as the steel was riveted, the Gypsteel pre-cast gypsum floor and ceiling slabs went in. The ceiling and floor were grouted. The floor was ready for finish, and the ceiling for plastering. Any weather when men can work is Gypsteel weather. Not a day was lost on this job because of cold, even in freezing weather.

Compare this ease and speed of installing Gypsteel Floors with any other system you know of. Then let us come and show you how it can save time and labor in your office buildings, apartment houses, churches, schools, hospitals, etc. Consultation with our engineers involves no obligation.

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essays sponsored by the Chicago Chapter, A. I. A.

There are eighteen chapters in the book, each treating a different phase of current architecture. Chapter titles include: "Tall Buildings of Today," by John A. Holabird and Henry J. B. Hoskins; "On Planetaria," by Ernest A. Grunsfeld, Jr.; "The Planning and Architecture of Public Aquaria," by Edwin H. Clark; "Centers of College Life," by Irving K. Pond; "When School Architecture is Distinguished," by John L. Hamilton; "Modern Opera Houses in Europe and America," by Alfred Shaw; "History of Cinema Theatre Architecture," by George L. Rapp; "Chicago Theatre Building in Retrospect," by Arthur Woltersdorf; "Planning Branch Libraries," by Carl B. Roden; "Prison Architecture Through the Ages," by Ralph W. Zimmerman; "The Rise and Growth of Hospitals," by Richard E. Schmidt; "Chicago Churches," by Thomas E. Tallmadge; "Architectural Expression for Chicago's 1933 World's Fair," by Hubert Burnham; "Distinction in Brick Architecture," by Barry Byrne; "Thoughts on Cooperative Apartments," by Henry K. Holsman; "A New Era Dawns in Housing," by Eugene H. Klaber; "The Landscape Setting of Buildings," by Jacob L. Crane, Jr.; and "Toward an American Architecture," by Irving K. Pond.

The Personality of a House

By Emily Post. Published by Funk & Wagnalls Co., New York. Illustrated; 521 pages; size 6¼x9¼; price $4.00.

SELDOM has anything been written which so delightfully tells just how the person-about-to-build thinks as this book by Emily Post, the daughter of the late Bruce Price and quite evidently an inheritor of his architectural flair. She talks about a house the way a client thinks about it and this point of view makes the book one which every architect ought to read. For instance, she writes:

"Another detail which architects, no less than contractors, take very casually, but which drives a woman who hates wastage almost to distraction, is the unnecessary confusion in which the finishing of the job is done. . . . The plumbers finish laying the pipes, and then go away leaving tubs and wash-basins and all other fixtures lying around everywhere that they don't belong: and they are much too heavy to move. Painters, as likely as not, scatter paint all over them. Then the plumber gets even and lays his hands all over the paint. The electricians gouge out the finished work of the carpenters and all of them combine to throw everything heavy and handy out into the flower-beds that have been hopefully planted. And the owner, knowing that every item delayed or destroyed is just so much loss to him, gets more and more nervous. One might suppose that the unceasing repetition of this experience would get on the nerves of the workmen, but apparently they like it."

And then she gives a number of hints on how to promote a tranquil mind while building. If there is anything an architect needs more than anything else, it is to know how to keep his clients happy and contented while building and Emily Post certainly knows how that should be done.

Entrance detail, Massachusetts house of Emily Post, author of "The Personality of a House"

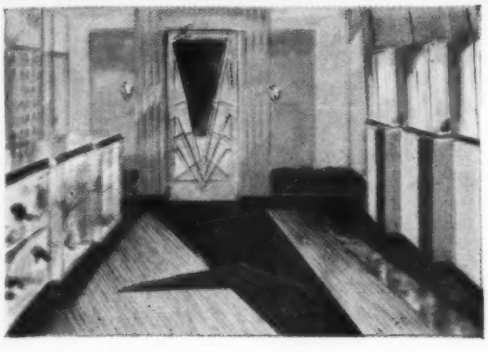
Her views of the architect are interesting. "Without an architect the building progresses exactly as a ship at sea with no one at the steering wheel. . . . Any builder can put up a hard block of a house that looks as though made of cast iron or tin. Only an architect of talent (or an owner of genius) can produce the subtleties of beauty. . . . True, all architects are not *good* ones. Not by any means. And bad ones are a total loss!"

And again, "How many times has a house-owner said to you: 'The design of the house was entirely my own. I merely had an architect to work out the mechanical details.' Which is very like saying: 'I diagnosed appendicitis myself—the surgeon merely operated.'"

The book shows a great deal of hard common sense. It discusses the size and placing of closets, book-cases, windows, and all that sort of thing. Few architects reading the book but will learn something about saving space and making a house more livable.

The book is sub-titled, "The Blue Book of Home Design and Decoration." It has 234 illustrations of interiors, plans, furniture, and practically everything that might affect the personality of a house which, in other words, is its livability. Some of its chapter headings are: "The Fundamental Principles of Architectural Beauty," "If You Are Going to Build," "The House That You Remodel," "The Principles of Color Harmony," "Interior Architecture," "The Periods," "Decoration in Preparation for Furnishing," "General Principles of Interior Furnishing," "Each Room in Detail," "For the Children of the House," "A House—or a Room—for a Man," "The House of Charm at Least Expense," "The Little House of Comfort and Convenience," "The Style We Know as Modern," and so on. There is a good index.

No. 4 *illustrating: "Thoughtful touches . . . to help in turning the client's mind to the architect's favor."*



Vahan Hagopian, architect, employs Armstrong's Jaspé and Plain Linoleum in the store of A. S. Beck & Co., New York.

Business takes a tip from the THEATRE

and up-to-the-minute architects inaugurate new decorative idea

STAGING, modern business men have learned, is just as important in modern business life as it is in the theatre. Settings *do* help sales, and Mr. and Mrs. Consumer will walk extra blocks to do their buying in an up-to-the-minute shop. No wonder these "Belascos of Business" are enthusiastic in their search for new and better decorative ideas. And no wonder that the architect who can give them valuable decorative ideas is getting good jobs in the business section.

Whether your client's product is sold over a counter or across a desk, whether he sells groceries, or professional advice, proper decoration will increase his sales. And no matter what type of decoration you choose, it can be based most successfully upon an Armstrong's Linoleum Floor. Compare the smart Armstrong Floors in these shops along New York's Fifth Avenue with the old-type floors in vogue a few years ago! Look at the floors in the better stores of your own city. You'll find Armstrong Floors in well-decorated business interiors all over the country.

You'll find a lot of valuable floor information in our new file-size specification book. This book, together with colorplates and samples of modern Armstrong's Linoleum, will be sent upon request. Look for our pages in the current Sweet's Catalog, too. For samples or advice, write to Armstrong Cork Company, Floor Division, Lancaster, Pa.

Armstrong's (A) *Product*

Armstrong's Linoleum Floors

for every room in the house

Since 1839 Crouch and Fitzgerald has been a leading name in leather goods in Manhattan. Here is their smart Fifth Avenue shop with its Armstrong Floor—Handmade Marble Inlaid No. 62.

PLAIN · · INLAID · · EMBOSSED · · JASPE · · PRINTED · · LINOTILE · · *and* ARMSTRONG'S CORK TILE

Made of Te-pe-co Vitreous China

COLOR IN THE PUBLIC TOILET

AMERICA has demanded and is getting color harmonies in its bathrooms — fixtures to blend with wall and floor.

"Tepeco" has recently found an expressed desire for the same harmonies in the public toilet and washroom.

In perfect harmony with any decorative scheme one may devise, they provide the utmost in beauty with no sacrifice in sanitation, for every "Tepeco" Fixture, regardless of its color or design, carries the same guarantee of durability and quality.

Full information and color charts showing the available colors on "Tepeco" All-Clay plumbing fixtures will be supplied on request.

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We make but one grade of ware — the best that can be produced — and sell it at reasonable prices. We sell no seconds or culls. Our ware is guaranteed to be equal in quality and durability to any sanitary ware made in the world. The "Tepeco" trade mark is found on all goods manufactured by us and is your guarantee that you have received that for which you have paid.

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WESTERN UNION TELEGRAPH COMPANY BUILDING, NEW YORK

TODAY—the development of American architecture has reached a plane that holds the undivided attention — the admiration and acclaim of the entire world.

Today—the architect and builder are causing vast edifices to tower more and more toward the sky—to stand as enduring monuments to present standards of design and efficiency of materials.

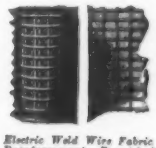
Today—as in years past—the American Steel and Wire Company is supplying a major portion of the wire fabric (the steel backbone of concrete) that enables plans to be turned into reality.

So—we take justifiable pride in the confidence engendered by our products—and extend the full services of our engineering and technical staffs to the solution of specific reinforcement problems. Write to our nearest sales office for information and literature.

WIRE FABRIC

THE STEEL BACKBONE OF CONCRETE

Triangle Mesh Wire Fabric Reinforcement. Furnished in rolls or sheets.



Electric Weld Wire Fabric Reinforcement. Furnished in rolls or sheets.

Western Union Telegraph Company Building, New York, Voorhees, Gmelin & Walker, Architects. Marc Eidlitz & Son, General Contractors. Senn-Herricks Corp., Fireproofing Contractor.

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NEW CATALOGS

Covering What Manufacturers Have to Say About the Advantages and Uses of Their Products

FINTUBE, THE MODERN HEATING UNIT

1...Catalog of the Fintube Radiator Co., Inc., 4402 Eleventh Street, Long Island City, N. Y. Illustrates and describes this type of concealed wall radiator, has pictures of installations and gives progress pictures, detail drawings of installation, etc. A.I.A. file 30 c 4.

WROUGHT IRON

2...Folder of loose leaf illustrations showing work of Hasselman and Salterini, metal craftsmen, 35 West 23 Street, New York. Covers various types of exterior and interior work. A.I.A. file 15 d.

SAFETY TREADS

3...Folder and loose sheets illustrating and describing various types of stair treads made by Wooster Products, Inc., Wooster, Ohio.

STEEL AND WROUGHT IRON FRAMES FOR CHURCH WINDOWS

4...Catalog No. 1 of the Philadelphia Supplies Co., Inc., 1741 North Sixth Street, Phila., Pa. Illustrates and describes this company's frames for church windows and the leaded glass trade. Full size details of construction. A.I.A. file 16 e 1.

ELECTRIC HEATING SPECIALTIES

5...Booklet of the Prometheus Electric Corporation, 360 West 13 Street, New York. Describes this company's plate warmers for apartments, clothes dryer, towel dryer, auxiliary electric heater, floor or wall type electric radiators, electric heat for pipe organs, steilizers for hospitals, etc. A.I.A. file 35 k 2.

RAIN FOR THE ASKING

6...Portfolio of loose leaf sheets illustrating and describing underground irrigation for lawns, according to the Skinner System of Irrigation. Published by the Skinner Irrigation Co., Troy, Ohio. A.I.A. file 38 h.

DIE STAHL KIRCHE

7...An unusually fine pictorial presentation of this unique church built at Cologne of metal and glass, published by the Copper & Brass Research Association, 25 Broadway, New York. Shows detail pictures of church, plans, and some views in color. Has a foreword by Professor Dr. Otto Bartning, the architect. An interesting presentation of a most modern church.

HAMILTON DRAFTING ROOM FURNITURE

8...Catalog with illustrations in colors showing the various types of drafting room furniture made by the Hamilton Manufacturing Company, Two Rivers, Wis. Accompanied by a separate section giving prices.

STRUCTURAL DETAIL PLATES ON TERRA COTTA

9...Two series of architectural detail plates showing "terra cotta standard construction" and "moderne ornament" are being issued by the National Terra Cotta Society, 230 Park Avenue, New York. Being published in loose leaf form.

ALMETL FIRE DOORS

10...Booklet illustrating and describing Almetl fire doors as made by Merchant & Evans Co., Philadelphia, Pa., together with pictures where fires had occurred.

PORTFOLIO OF HOUSES WITH MEDITERRANEAN ANTECEDENTS

11...Interesting collection of houses of this type with sketches showing details of windows and part of adjacent roof, section through jamb, and vertical section of window. Shows use of Fenestra casements by different architects; issued by the Detroit Steel Products Co., Detroit, Mich.

ALLEN ON INTERIOR FIRE PROTECTION

12...A data book written especially for the architect with complete data on interior fire protection on cabinets, hose racks, fire hose units, standpipe systems, fire line valves, fire extinguishers, etc. Issued by the W. D. Allen Manufacturing Co., 566 West Lake Street, Chicago, Ill. Illustrates and describes the various types of equipment made by this company. A.I.A. file 29 e 2.

EBERHARD FABER POCKET CATALOG 1930

13...Catalog illustrating and describing the various kinds of pencils, erasers, stationery sets, crayons, etc., made by the Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn, N. Y.

MODERN INTERIORS AND THE HERMAN NELSON INVISIBLE RADIATOR

14...In two parts under one cover, published by the Herman Nelson Corporation, Moline, Ill. Part 1 gives pictures of interiors of modern houses showing how invisible radiators have contributed to architectural planning as well as to better balanced furniture grouping. Part 2 contains pictures of office, apartment and hotel interiors. Also shows pictures of the heating element, grilles, and manner of installation. A beautifully printed brochure.

SPECIFICATION FOR THE GORTON SINGLE PIPE VAPOR HEATING SYSTEM

15...Loose leaf specifications, just compiled, of the installation of this heating system, issued by the Gorton Heating Corp., 96 Liberty Street, New York. A.I.A. file 30 a.

ASBESTONE HYGIENIC FIREPROOF FLOORING

16...Booklet illustrating in colors the use of this flooring laid in plastic form. Issued by Franklyn R. Muller, Inc., Waukegan, Ill. Describes its advantages and gives a table compiled from University tests showing the relative values of Abestone flooring over five flooring materials most commonly used as regards sanitary properties, quietness, resiliency, non-slipperiness, water-proof quality, durability, resistance to fire, relative weight. Lists typical installations.

AIR-WAY AERIET AIR TREATMENT

17...Called, "the concealed heater that breathes air into the living zone." Issued by the Air-Way Heating Division of the Air-Way Electric Appliance Corp., Toledo, Ohio. Illustrates and describes this heating unit, provided with motor to activate air, and shows pictures of typical installations, and methods of same.

● AMERICAN ARCHITECT

57th Street at Eighth Avenue, New York City

Please see that I receive the following catalogs reviewed on this page:

Numbers .....

Name .....

Address .....

Occupation .....

like hundreds of other skyscrapers

CAPITAL NATIONAL BANK BUILDING

LANSING, MICHIGAN

is insured against pipe replacements

THEY are building another magnificent skyscraper in Michigan . . . the new home of the Capital National Bank in Lansing. Into this splendid structure are going arteries of cast iron soil pipe . . . *permanent pipe* . . . pipe that will be serving just as satisfactorily a century from now as the first year after it is installed. So sure are they that these cast iron soil pipe lines will serve *indefinitely*, that the manufacturers back them with a *100-year guarantee* . . . your insurance against pipe replacements. Picture the satisfaction, the confidence of the Building Owner with this 100-year insurance. Then picture yourself in his place—

and specify

The SOIL PIPE ASSOCIATION

BIRMINGHAM, ALABAMA

Bank Building for the Capital National Bank, Lansing, Michigan. Hopkins & Dentz, Architects and Engineers.

New Type of Building

(*Continued from page 27*)

these units need be only large and wind bracing enough to give the main vertical members lateral support.

The real weight carriers will be outside the walls where they belong, saving valuable space, being inaccessible to fire, giving structural value and meaning to the exterior, shutting off noise between suites.

Down where space is cheap in the wide interior, where overalls and oilcans preside, make these important columns at least partly of low stress, low cost material. Three thousand pound concrete is a present practical fact. Extreme care would easily add another thousand. It also would justify a safety factor of two instead of two and one-half.

Up where the main tower really begins, say at the six hundred foot mark, steel must bear the burden. Still higher, where every pound of weight calls for twenty more below to support it, let aluminum alloys take the place of steel. Metal that gives seven hundred foot dirigibles strength to ride the uncertain winds should surely rate consideration for sober building requirements.

MAIN columns of such a building would be enormous by present standards, but would they be heavier in section than the great towers that carry suspension bridge cables? A recently planned New York office building six hundred feet high carries a four hundred square foot bay on three hundred forty-eight square inches of column steel. That was figured for building code live load assumptions, for heavy floor systems to support these loads that never occur, for walls and partitions of brick and stone and tile, the heaviest materials that could be found for the purpose.

Let's lock the building official in a padded cell, give him some mossy traditions and rule-of-thumb assumptions to play with, and see what could be done in his absence.

Not only must the designer assume lower floor loads above the first few hundred feet, but the building management must compel them.

Twenty pounds is generous for residential live loads. Not one office in a hundred but could meet the same limit if the effort was made. Let that hundredth occupancy go into buildings designed as at present for seventy-five pound floor loads. Bathrooms need not weigh a ton apiece, once the challenge is issued to the ceramic industry. What they lose in avoirdupois they may well gain in grace. Copper radiators can deliver the needed calories at a third the burden cast iron imposes. Office occupancies in these days do not need two-ton safes.

Walls of brick or stone for a building a thousand feet high are an anachronism. They serve no end that lighter materials will not also realize. What does a wall do? It shuts out moisture, retains heat, resists fire. What should it be? Light, economical, durable and above all it should be beautiful.

Why not make up hollow wall sections in wide units, story high, of sheet metal filled with some light, inert insulator like zonalite? Bake vitreous enamel on them to keep water forever away, to give them color, and to shed dirt. Stamp texture into their surfaces if texture is important where walls are measured in acres and sight distances in furlongs. Install window frames and sashes before these insulated walls are hoisted and welded in place. Spray enamel on the welds, too, with an oxyacetylene torch, to make double assurance.

There's a wall for you that meets the requirements and weighs a quarter as much as stone or brick. Why prolong the farce that masonry walls are essential to a big building?

Insulate the walls and there goes one-third the weight of piping and radiation necessary to keep the masonry-walled building warm. Double-flash and weatherstrip the windows and kiss another third good-bye. Take a few more inches off these column sections.

A word or two about the units that make up the great residence tower; the independent structures carried on the cross trusses between columns. Here again is the opportunity to save weight and material. Has it escaped your attention that structural shapes of aluminum alloys are being rolled and used? It would take a bold man to stand them on end and rest a high building on them—but how about ten or twenty stories, and why not frame the floors with them? Structural material that frames speed planes won't be apt to give way under an occasional Charleston.

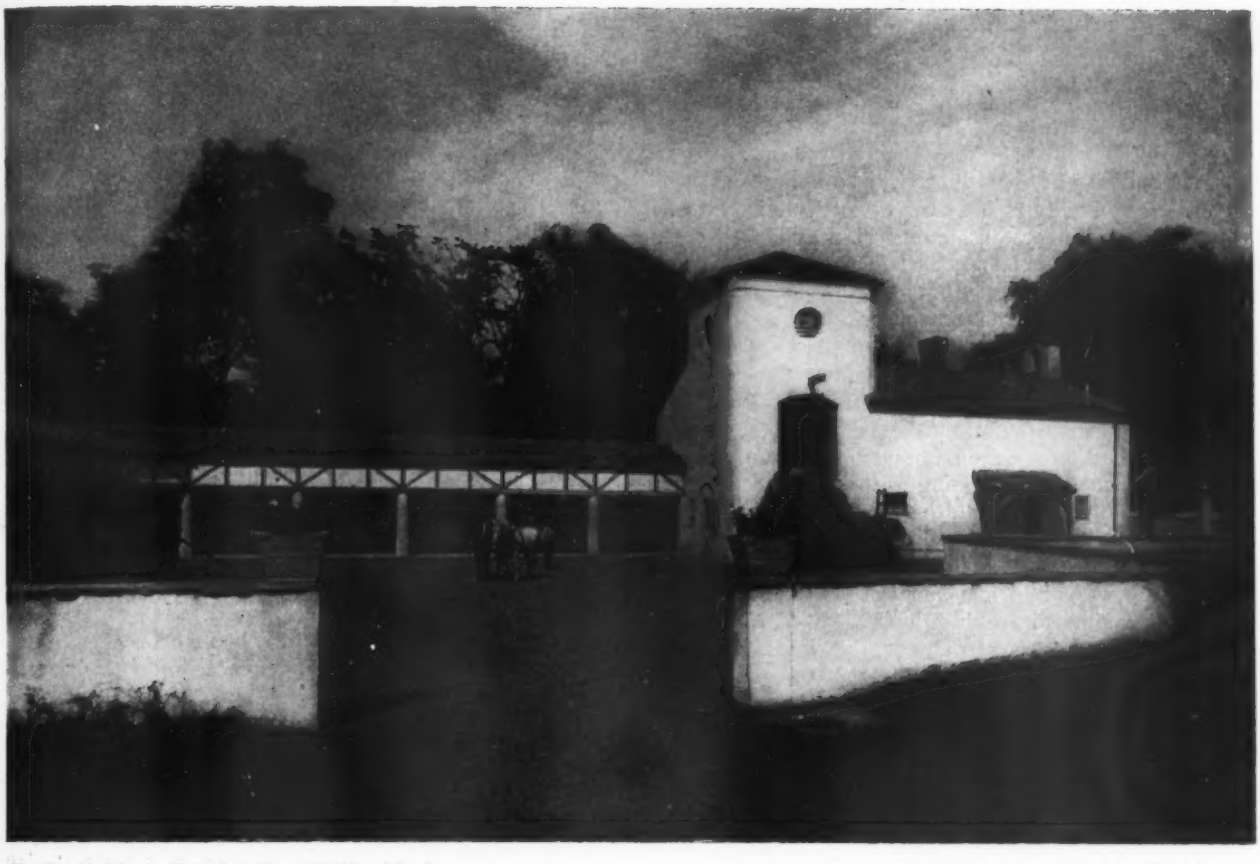
For a floor slab that combines light weight with strength and stiffness, that shuts off sound, that keeps the thickness to a minimum, let's go back a generation. I give you, wood. Not the wood of our fathers, but a material which we have learned to saturate with chemicals so that it won't support fire and won't contribute heat to a fire in which it is involved. With four to six inches of this material, solid, slow to yield, any underwriter you can name will ask no better risk. Weight, with finish floor above and plywood panelling below, perhaps fifteen pounds per square foot.

WOOD so treated suggests itself also for column and beam protection. Heat penetrates it very slowly. Fire eats into it only by degrees. Minor structural members boxed in with two inches of fire retardant treated wood would be safe from any fire that can happen in a room with twenty pounds per square foot of combustible contents. And you can't overlook the weight even of column fireproofing in a building two hundred stories high.

Plaster, as we have known it, will find little place in the building of the future. It weighs too much for its function. Whether its successor will be of ceramic or cellulose origin, a volcanic origin, does not now appear. But one thing is certain, it will not weigh thirty pounds per square foot of partition area, nor yet twenty.

Fire?

Yes, there will be fires until people wear asbestos clothes, suck peppermint sticks instead of cigars, and eat fruit from tin plates. Might as well face the fact and decide what must be done about it. Little fires don't need to grow into big ones. A fire is dangerous only if it grows, or if it can gnaw at the structural integrity of the building in which it occurs. The last fifteen years have taught us to circumscribe infant fires with walls and floors through which they cannot go, and to cover struc-



E. B. Schley, Stable, Far Hills, N. J. *Hyde & Shepherd, Architects.*

"Stable Fittings by FISKE"

THE beautiful stable shown above, owned by E. B. Schley of Far Hills, N. J., is another link in the chain of outstanding FISKE installations extending over the past 70 years. The excellence of FISKE design, materials and workmanship has manifested itself many times over to the complete satisfaction of America's finest country estate owners.

Architects who specify materials for such installations realize that to specify FISKE is to command the resources of an organization of skilled artists and master-craftsmen whose wealth of experience in this highly specialized work always results in a close cooperation with themselves and their builders.

FISKE consultory service is always available. Write for illustrated catalogue of what FISKE has done for others in "the home of the horse."

J.W.Fiske IRON WORKS
80 Park Place ~ New York
ESTABLISHED 1858

SPECIALISTS IN ORNAMENTAL METAL WORK

tural members with protection through which crippling heat cannot penetrate. More to the point, we have learned how long fires are likely to last in different occupancies and how to estimate the needed resistance of column, beam, floor and partition in terms of time and temperature so that hardly a pound of unnecessary weight need be expended for the purpose.

THE building of the future will be subdivided, as all our great buildings are now divided, at intervals, by fire walls and floors into units in which a fire, even though triumphant, could not attain alarming proportions, and beyond which it could not spread. Below and above each of the tiers of trusses on which the structure is carried there should be a floor without openings except for the inclosed elevator shafts, a floor through which even four hours of fire temperatures cannot penetrate. Vertically through the structure there must be fire division walls cutting off areas of not more than ten thousand feet and communicating with each other only by locks with automatically closing fire doors. The trusses themselves must be jealously protected. Residential, business, commercial and industrial sections must be surrounded with walls and floors of resistance consistent with their estimated fire durations.

This, after all, is the second line of defense. The great liners, not so different after all from the project with which we are concerned, have utilized for years two devices which promptly detect and quickly extinguish incipient fires. The one draws from each quarter of the hold thin streams of air, passing them through glass tubes before which an ever vigilant observer watches for smoke. The second releases at the first indication of fire temperatures a flood of extinguishing carbon dioxide. Devices are commercially available that shriek a warning at some central point whenever temperature in a room exceeds a predetermined limit.

There are, in fact, more well tried and proven fire protection and extinguishing measures than there is space to describe them. There is no situation to be met that is not met with confidence in buildings already in use.

TRANSPORTATION is simplified by living in three dimensions instead of two, but not avoided. Elevators of today set our precedents. Banks of express elevators, the limited trains of a new day, will serve the independent units. Banks of locals will simplify distribution floor by floor. Express elevators will travel faster than they do now, drawn by the invisible grip of electromagnetism. Coils lining the shaft will be supplied with power to generate a field always just above that of the car. Descending cars will regenerate much of the power that lifted them. Here and there, at express stops, a "cross-town" line may be necessary. Promenades and playgrounds on the various step-backs will afford fresh air and sunshine. In the low value interior of the lower stories, unbroken floor spaces made feasible by the cross trusses will accommodate gymnasium, plunges, theatres, tennis courts, skating rinks and practically any usual form of recreation except golf.

Picture a business man's day in the building of the future. He may wake, quite literally, among the clouds but at least if the sky is bright he can enjoy it, very likely forty miles of it. But for that and the cleanness of the air his apartment might as well be ten stories up as a hundred.

He leaves his family perhaps ten minutes before due at his office. He does not run for the 8:15. He needs no overcoat and rubbers; worries not whether the car will start, the draw bridge be open, or the ferries shrieking in harbor fog. No subway jam nor tedious surface car awaits him, no taxi driver will slip a vehicle across his path just as the lights change or splash him with muddy water at street crossings. He can lunch with his family if he likes, or go to the club without loss of time or hardship of travel. No bluecoat will hand him parking tickets or herd him with other human sheep at street crossings.

His children cross no humming speedways on their way to school, nor must they be personally conducted to the seat of learning. Not a very good place for children anyway, this building of the future, but is it not better than the apartment house conditions under which thousands of little folk are now existing?

NOT a good place even for many adults, but there again we are dealing with conditions, not theories. The building we have pictured is not a jail. The only difference is that the dive out of doors is by preference not a necessity. Thousands of urban workers seldom see the sky even now. A walk in a crowded downtown street does not give a breath of fresh air. It's usually an unpleasant exposure to wind borne infections.

The man who loves nature had best stay with it, even though he endure the hardships of the such-and-so railway to win the privilege. For the individual whose spiritual resources lie elsewhere, the building of the future offers many advantages over our present day, urban existence.

Business and industry some day perhaps will decentralize. Till they do, why not accept the obvious solution of time and space limitations and live in three dimensions instead of two? When a builder arises, bold enough to attempt it, and finds an architect with skill to plan it, the building of the future will find plenty of occupants.

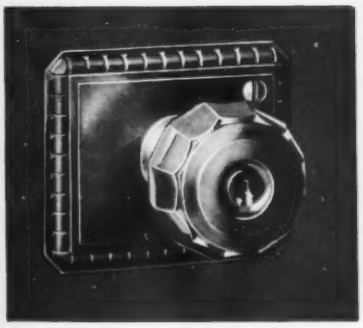
Improved Conditions Reported by U. S. Chamber of Commerce

IMPROVED business conditions are reported in a news release of the Chamber of Commerce of the United States, dated June 2, which states: For the first time, capital issues during a month of 1930 exceeded those for the corresponding month last year, the April, 1930, flotations being 15% greater than those for April, 1929. For the first four months the volume of new capital obtained by domestic producing and distributing corporations totaled $2,100,000,000, and in addition borrowings by public authorities were $460,000,000, as compared with $339,000,000 for the corresponding period last year.

Mortgage agencies indicate loans are being made on a conservative basis and at gradually decreasing rates for first-class loans, but investors continue to show a tendency to confine loans to building projects for which there is a demonstrated economic need.

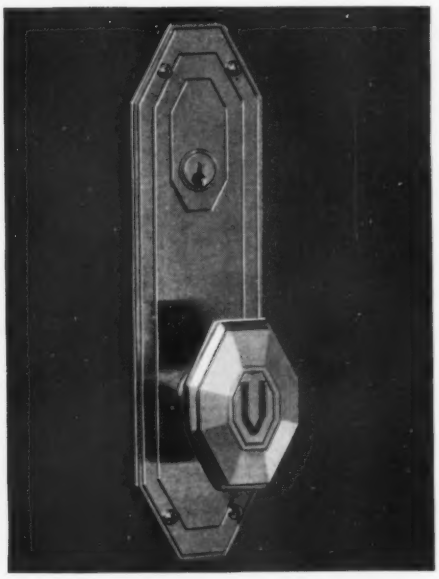
Reports from 32 (*Continued at bottom of page* 90)

SARGENT HARDWARE



TOP. *Design for the Mayo Clinic, Rochester, Minnesota; Ellerbe & Company, architects.*

BELOW. *Sargent Union Lock, designed for the Fisher Building, Detroit; Albert Kahn, Inc., architects.*



TOP. *For the Smith-Young Tower Building, San Antonio; Atlee B. & Robert M. Ayres, architects.*

BELOW. *Design for the Union Trust Building, Detroit; Smith, Hinchman & Grylls; Donaldson & Meiers, architects.*

. . . special designs for outstanding structures of the country

THE WHOLE is no better than its parts. In the building of the country's magnificent, modern structures — hotels, hospitals, office, educational and public buildings — every item of construction and equipment must of necessity be the best. . . . For building operations of this high nature, and for residences large and small, Sargent Hardware is selected. For its unexcelled quality. For its durability. For its perfect operation. And for its appropriateness and beauty of design. When individual designs of hardware are required, Sargent designers co-operate closely with the building's architect and decorator. Designs shown are proprietary to a few of the newest outstanding structures of the country. Sargent & Company, New Haven, Conn. 94 Centre St., New York City; 150 North Wacker Drive (at Randolph), Chicago.

SARGENT

LOCKS AND HARDWARE

Modernism - Publicity - Education Discussed at the A.I.A. Convention

(*Continued from page 22*)

and publicity. Many of those opposed to paid advertising stated that the local chapter of the Institute or society issues booklets or similar documents. In advertising circles this form of publicity is known as direct mail matter and is just as much paid advertising as a page in any magazine or local newspaper. This is cited as an example of the confusion that now exists in the mind of the profession as to what advertising means. It was unfortunate that the program did not provide for a further discussion of this important problem and that one or more speakers qualified to discuss the subject were not present to clarify what publicity is and what it can do to establish the profession in its rightful position. Apparently very few are ready to admit that some course of action in this matter is unnecessary. The argument centers around how it should be done to accomplish the desired ends. The importance of this question is evident, for five years ago an open discussion of publicity for architects, in an A. I. A. convention, would have been carefully avoided. One delegate expressed the opinion that paid advertising would be utilized by the Institute within the next ten years.

THE second evening meeting was in charge of William Emerson, Chairman of the Committee on Education. Leicester B. Holland of the University of Pennsylvania School of Fine Arts and the Congressional Library was the speaker of the evening. His subject was, "An Analysis: a Comparision of the Relative Values and Significance of the Cultural and the Professional Subjects in a School Curriculum." His suggestion was that architecture should be taught by paralleling the history of architecture with the social and economic causes and background of its development. A course of this nature would properly prepare students to better understand and develop the architecture of the era in which they practice architecture. The Committee on Education expressed the belief that traveling scholarships in architecture that provide for more than one year's travel should be reduced to about one year and be offered to a greater number of persons. The idea is a good one and should make these scholarships of great practical value.

The resolution offered in the report of the Board of Directors to amend the by-laws of the Institute was approved. The Board believes that the authorized change in the by-laws will enable the Institute to carry on increased activities in a more orderly and satisfactory manner. The Committee on Contracts reported that the fifth edition of the standard form of bond of the A. I. A. which has been revised, is now printed and ready for distribution. The Committee is at present preparing a California edition of the standard contract documents that will meet the particular legal requirements of that State. The Committee on Allied Arts urged the extension of the work of this committee into the territories of all chapters of the Institute to further the arts and crafts allied to architecture. In addition to assisting in the passage of the Cramton, Shipstead, Keyes-Elliott bills, the Committee on Public Works reported that it is endeavoring to find some proper method of furnishing the Government with a list of architects of high qualifications in various sections of the country where Federal buildings are to be built.

Sketches were submitted by the Building Committee for the development of the Octagon property. Mention of the Octagon property was again the signal for much discussion as has been the case ever since it was proposed to build an office building to house the Institute's activities. Arguments at the sixty-third convention centered around whether a twenty foot strip of land to the east of the property should be utilized for building purposes, since this will entirely enclose the garden to the rear of the Octagon House. It was argued that building upon this area will further remove the property from its original character. One delegate brought out the fact that the architects for the new building were in the position of an architect faced by a building committee of several hundred members and a motion was finally passed accepting the sketches as submitted including the erection of a low building on the twenty foot strip of land in question. There is no question but that the executive offices of the Institute should be properly housed in a building suited to the purpose. Whether the Institute requires and can afford to maintain an auditorium and library is a moot question. For some reason this matter did not enter into the discussion. Perhaps there has been enough said upon this aspect of the building in past years.

The Committee on Registration Laws is developing a revision of the present model form of registration law. According to the report of the Committee on Industrial Relations the recognition of craftsmanship has been taken up during the past two years by fourteen chapters of the Institute and others have the matter under consideration at the present time. The report of this committee also called attention to the evils of shopping of sub-contractors' bids by general contractors and to the fact that architects should exert their power to correct the practice. A brochure on a uniform accounting system for architects is in course of preparation by the Committee on Standard Accounting and will probably be ready for distribution within a year.

Improved Conditions Reported

(*Continued from page 88*)

life insurance companies carrying about four-fifths of the total assets of legal reserve life insurance companies and about four-fifths of the total mortgage loans of life insurance companies indicate that on April 30 such total loans were $5,885,000,000, against $5,791,000,000 on December 31st last.

There is continued improvement in the financial situation of building and loan associations. Withdrawals are generally reported now to be normal, and associations in nearly all sections have ample funds. Instances in which available funds exceed the demand for satisfactory loans are increasing in number.

The usual seasonal April decrease is less than in the corresponding month last year. Generally, there is little change in savings totals as a whole.

EMPIRE STATE BUILDING
NEW YORK, N. Y.

The World's Tallest Building . . . . .

Located on the site of the old Waldorf-Astoria, New York. Height 85 stories, 1046 ft. to main roof, with mooring mast 200 ft. additional.

To be equipped with

58 Signal Control Elevators

by

OTIS ELEVATOR COMPANY

SHREVE, LAMB & HARMON
Architects

MEYER, STRONG & JONES
Engineers

STARRETT BROS. & EKEN, Inc.
Contractors

NEW JERSEY'S TALLEST

LEFCOURT-NEWARK BUILDING, NEWARK, N. J.
Architect: Frank Grad, Newark, N. J.
Engineer: Eadie, Freund & Campbell, New York City
Plumbing Contractor: Jaehnig & Peoples, Newark, N. J.
Heating Contractor: Schrenell Bros., Newark, N. J.

Unusually effective in interior plan with its commanding and graceful exterior lines, this recently completed building ranks with some of the finest in the land, a structure of which New Jersey may well feel proud. Thirty-seven stories from street to tower—the highest building in the State of New Jersey—the Lefcourt-Newark Building is the latest addition to Newark's skyline. Naturally the architects and engineers, experienced in specifying for some of America's finest buildings, turned to time-tested and quality-proven material.

Thus, as in many previous instances, they chose NATIONAL for the major pipe tonnage. In addition to NATIONAL Pipe for the heating, soil and waste lines, they specified NATIONAL Copper-Steel Pipe for the vent lines and rain leaders as an additional protection against atmospheric corrosion. Many years of experience and numerous service tests have proven that copper-steel pipe gives added life to those lines exposed to alternate wet and dry conditions. Write for Bulletin No. 11, describing—

NATIONAL COPPER-STEEL PIPE
The Original Copper-Steel Pipe

NATIONAL TUBE COMPANY—Pittsburgh, Pa.
Subsidiary of United States Steel Corporation

NATIONAL PIPE

Boston's
newest beehive of business is topped with a bonded Carey Roof

An important unit of the fine North Station group, at Boston—the new North Station Building, housing every type of business, under a Carey Built-up Roof.

THIS is the architect's conception of the new North Station Building, Boston. Thirteen-story, fire-proof, steel and reenforced concrete. A fine building with a superfine roof specified to protect it.

A Carey Built-up Roof! A wise investment in weather-protection, as every architect knows—a guaranty-bond roof of permanent satisfaction. Whatever type of building *you* are designing—office, industrial or institutional, public or residential—there are Carey specifications to "fit" it overhead. Shall we send you our Architects' Specification book?

Carey Feltex Built-up Roofing—Carey Asbestos Built-up Roofing—Carey Combination (Abestos and Feltex) Built-up Roofing . . . in your city there is a Carey representative ready to tell you which specifications are best suited to the building you are planning.

Carey
BUILT UP ROOFS
"A ROOF FOR *EVERY* BUILDING"

THE PHILIP CAREY COMPANY ✦ *Lockland*, CINCINNATI, OHIO

They Talked About Advertising

(*Continued from page 23*)

• It was freely said, in and out of the convention hall, that selling the idea of good architecture to the public will not help architects to get jobs. Let a family be sold on the idea of good architecture, let them understand it somewhat, let them insist on it—and the construction company or the stock plan firm will quite logically tell them that that is what they are going to get. How is the poor prospect to know? Appreciation of good architecture and its commercial value is merely a stepping stone to the purchase of architectural service. It makes a good drive, but does not sink the ball on a five hundred yard hole.

• Advertising of architectural services is economic advertising. The more that such advertising is done, the greater will be the number of projects on which architects are employed. Their competition is not with each other, but with contractors and various types of construction companies, engineers, and stock plan houses. These other services generally result in greater cost to the owner. But who is going to tell the owner the story? The construction company or the stock plan house?

• Lancelot Sukert, director of the Detroit Chapter and President of the Michigan Society of Architects, says that the first thing he has to do when approaching a new prospect is not to sell him the idea of using Lancelot Sukert but to sell him the idea of employing an architect. This in the face of competition which lays down plans and specifications stated to cost nothing and only quoting the cost of the finished building!

• One delegate said that five offices in his town had gone out of business since the first of the year. These were among the leading architects. At a recent meeting a contractor said to him, "In five years all you fellows in this town will be working for us contractors." And the architects think he's right, with the exception of two—one of whom uses paid advertising.

• Architects compelled to face starvation or get out of the Institute are going to get out of the Institue. This whole matter of advertising should be a question for individual chapter action. If they want it and feel that it is needed in their section, they should not face Institute expulsion for trying to make their daily bread and butter. It is a case of States' Rights.

• F. P. Byington, President of the Producers' Council, said that competition among products is becoming one of price and not of quality. Producers want architects to be in a dominating position, for they are the watch dogs of quality. And he pledged the Council to cooperate in every way and to give any possible aid that architects desired.

• Men who build houses are frequently on bank boards or building committees. If they know what architectural service is and have had favorable personal experience with it, then they are going to see that an architect handles the larger operations. One of the best means of promotion for the profession is through an intelligent and business-like handling of residential work, even the smaller projects.

• Bennett Chappel, vice-president of the American Rolling Mill Co., told the delegates that when he built a house five years ago he employed an architect because he thought it the thing to do. When he found out how much the service would cost, he said that he never thought that any man in this day and age would have the nerve to ask for so much money to do so little. But as the work progressed, and he found out what his architect actually did, his attitude changed and he came to feel that the architect was worth every cent paid. The general public should be made to agree with Mr. Chappel's revised idea, not his first. But somebody must tell it the story.

• Architects like to compare themselves to lawyers and doctors. But the doctor, for instance, has no competition from others. According to the New York Compensation Laws, if a good Samaritan removes a cinder from a fellow worker's eye and infection develops, the employer is liable. The lawyer likewise has no competition except from his fellows. But the architect! His case is so absolutely different that he is far closer to the profession of advertising than he is to that of medicine.

• A Detroit delegate urged that manufacturers be asked to advertise, "Consult An Architect." His chapter had taken this matter up with its local Producer's Council club, being inspired by a letter written the chapter by THE AMERICAN ARCHITECT. William D. Sawler, of the Morgan Woodwork Company, told how his company is going to spend $150,000 advertising, "Build Your Home Architecturally Correct. Consult Your Architect."

Can the Rain Get In

(*Continued from page 49*)

very well-known builder and a nationally famous architect could have saved six years' trouble and an enormous amount of expense. The only weak points in that whole building were at the set-back walls and at the floor lines. The parapets were flashed all the way through, and gave no trouble.

No matter how good the material and workmanship may be, wall saturation will always occur. The important thing to do is to flash the wall at all doubtful places, so as to break up the volume of water which increases from floor to floor on the way down. This will not only prevent leaks, but will also protect the steel structure of the building from corrosion.

Sir Edwin Lutyens, the eminent English architect and structural engineer, who designed the new British Embassy at Washington, said recently that he did not think the average skyscraper could endure more than forty years. After examining the steel on some of our twenty-year-old buildings, I sometimes wonder if Sir Edwin isn't a bit of an optimist.

A new angle on BUSINESS FLOORS

A handsome, comfortable Bonded Floor in one of the New York shops of The Hilton Co., Inc.

Without question, one of the most inexpensive ways an architect can make a store or office look successful—progressive—up-to-date—is to specify a colorful, modern cork-composition floor. This type of floor offers many possibilities for creating "atmosphere"—that intangible yet necessary asset of modern business.

Bonded Floors come in realistic marble designs and rich tile effects—a wide choice of patterns, ready made or designed to order. These durable, quiet floors provide comfort underfoot for employees and customers at moderate cost.

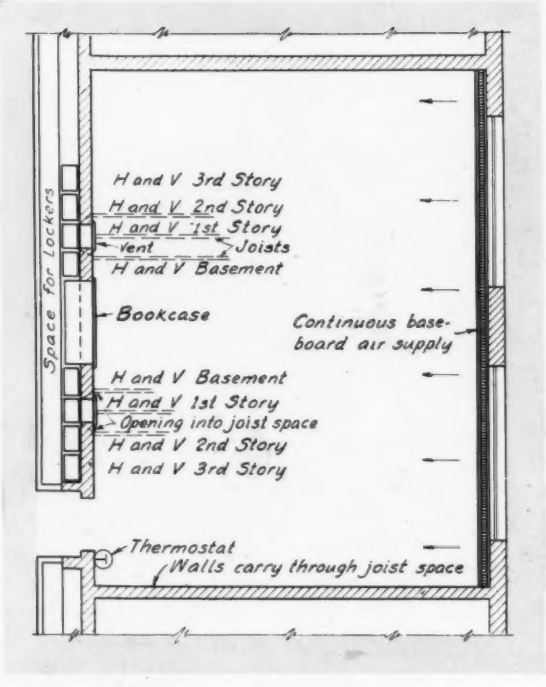
Let us explain how and why Bonded Floors will more than satisfy you. Write our Department K.

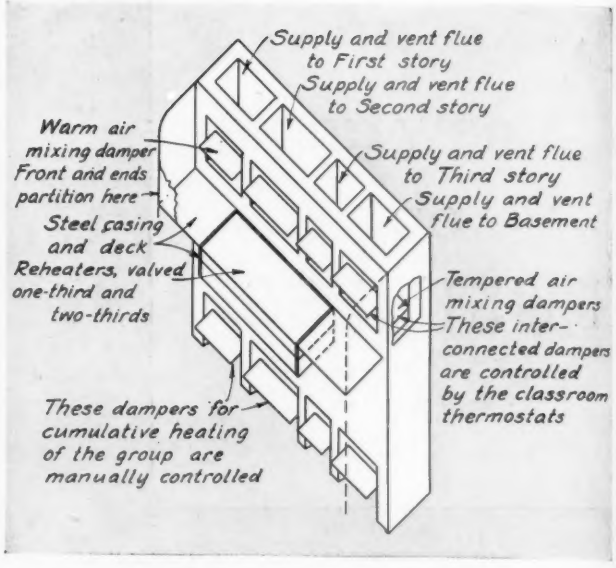
CONGOLEUM-NAIRN INC. · *General Office: Kearny, N. J.*

BONDED FLOORS

SEALEX LINOLEUM

Bonded Floors are floors of Sealex Linoleum and Sealex Treadlite Tile, backed by a Guaranty Bond issued by the U. S. Fidelity and Guaranty Company. Authorized Contractors of Bonded Floors are located in principal cities.




Supply and vent flue to First story
Supply and vent flue to Second story
Warm air mixing damper
Front and ends partition here
Supply and vent flue to Third story
Supply and vent flue to Basement
Steel casing and deck
Reheaters, valved one-third and two-thirds
Tempered air mixing dampers
These inter-connected dampers are controlled by the classroom thermostats
These dampers for cumulative heating of the group are manually controlled

Zone heating: the front partition of the group reheater is removed to better show construction

Left—Typical plan of a first story class room

"Floors" as Heating Ducts

(*Continued from page* 43)

Each of the reheating chambers has indicators which show to the fireman in the basement, the heat condition or demand in all the rooms. The heating surface at each chamber may be varied in increments of 33⅓%, with almost infinite variation of the air delivery temperature at each chamber.

Auxiliary dampers are always provided by aid of which the heating-up effect is cumulative prior to arrival of the pupils, so that all of the warm air goes to the remaining cool rooms as the rooms of zone after zone reach the temperature at which the thermostats have been set to operate.

The air supply usually is delivered into the class room from an interior wall, through adjustable diffusers about eight feet above the floor, and the air usually is blown toward the windows.

The conventional point of air delivery into the class rooms leaves something to be desired, in that the distribution of the air depends on the adjustment of the diffusers, and in that the warm air, passing across the rooms, tends to fall down along the glass surfaces as these absorb its heat, sometimes causing a rapid air circulation over the occupants of the outer row of seats. While it is true that this air movement is to be preferred to the baking effect of exposed radiators as with split systems, it is sometimes noticeable, and it is desirable to minimize it.

The Jones Junior High School, named after a famous former Toledo Golden Rule Mayor, was authorized to be built in 1926. It was to be built rapidly, on a constricted site, and a trial was to be made of the use of skeleton joists.

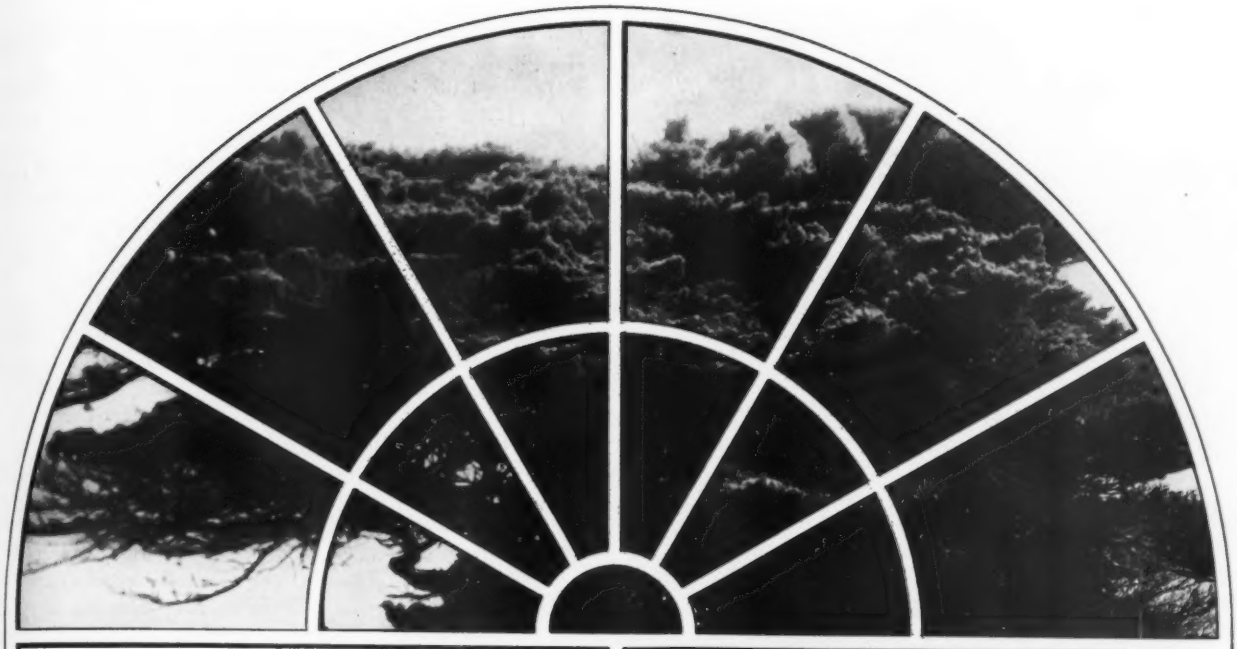
It occurred to me that here would be an excellent opportunity to attempt a large-scale trial of an improved method of air distribution and modified panel heating. I had used slot-baseboard introduction of the air supply in several gymnasiums and in many kindergartens with success, the air being delivered to the slots from tunnels along the outside walls. I had heated a large enclosed practice gymnasium almost entirely by warm air carried between the concrete floor joists, so that there was some precedent for this rather major step in unconventionality.

In this case I proposed to make the entire space between and around the joists of each class room a part of the air supply duct to that class room; the temperature of the air in this space always being the temperature required to keep the class room comfortable. Massillon bar joists were used.

By using the joist chamber in this manner we would surely have dry joists and warm floors, and we would save one supply flue in each flue-bank, since the supply flue, having delivered the air to the space under a given room, becomes available as a vent from the same room. With conventional flue arrangements the supply flue for a given room cannot serve to exhaust from that room, being available only for the room next above. Thus for a two story conventional school, three flues in each group are necessary: V1, H1 and H2; and for a four story school five flues in each group are required: V1, H1, H2, H3 and H4. With the skeleton joist scheme however we need only H1, H2, H3 and H4, each serving also as an exhaust from the same room to which it has delivered its air supply.

We knew that the baseboard slot-vertical-delivery of the air gave satisfactory air distribution, causing a uniform transverse travel across the room and counteracting the down flow due to the windows.

We knew that there was little to fear from drafts with such a delivery-point and direction, as the air has



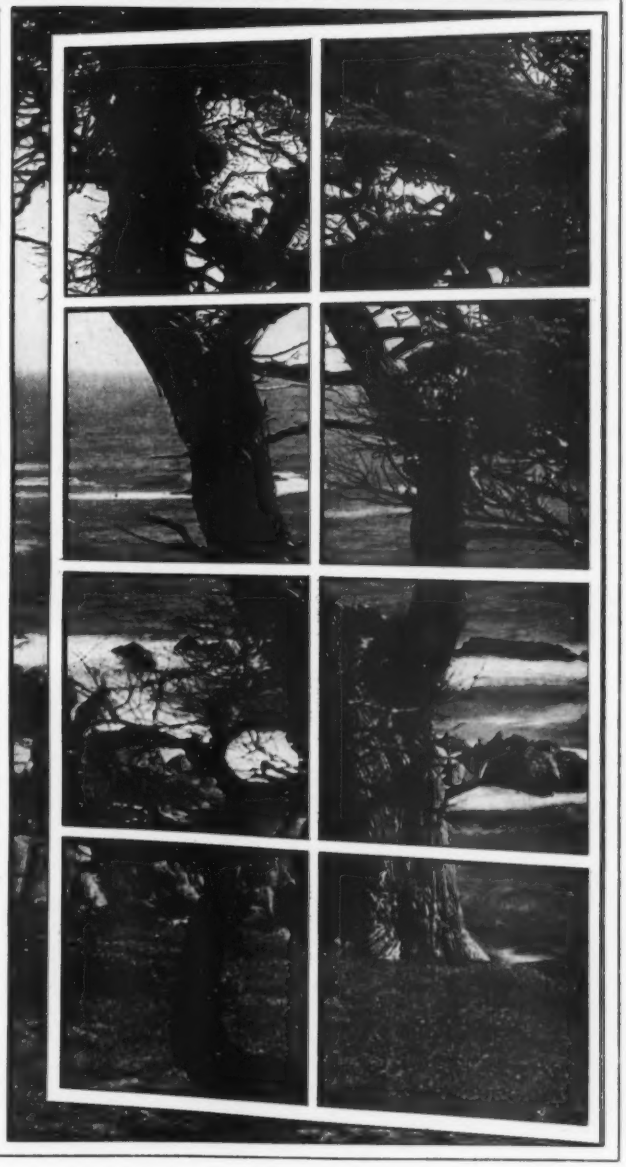
FLATTER, BRIGHTER ON BOTH SIDES

MADE by a brand-new process, the new Pennvernon Window Glass is *born* flat and *kept* flat throughout its entire manufacture—from molten "metal" to finished sheet. No chance to become bowed, bent, defaced. No "right" or "wrong" side to bother the glazier in setting this new glass.

And this brighter, flatter, better glass costs no more than *ordinary* window glass!

The warehouses of the Pittsburgh Plate Glass Co., conveniently located in all the leading cities of the United States, are ready to make prompt deliveries. Let us send you our new Pennvernon Booklet containing the absorbing story of the new process by which this glass is made. Write the Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Pennvernon
flat drawn
Window Glass



"More than a Panelboard —A Service as Well"

You receive in FA Panelboards all that the science of engineering and the guidance of practical experience can build into a panelboard. Each is a thoroughly standardized product in every particular both in itself and with the steel cabinet. They are safe and long lasting in service without maintenance.

Talk to your local FA man. Learn of his practical help by writing or 'phoning today— we consider it our obligation to aid you to effective panelboard and switchboard installation.

Frank Adam
ELECTRIC COMPANY
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231 Congress St.

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Ralph E. Jones,
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Chicago, Ill.
Major Equipment Co., Inc.
4603 Fullerton Ave.

Cincinnati, Ohio
E. F. Schurig,
44 East Third St.

Dallas, Texas
R. S. Wakefield
1814 Allen Bldg.

Denver, Colo.
Alex. Hibbard, Inc.
1940 Blake St.

Detroit, Mich.
H. H. Norton,
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Orlando, Fla.
F. W. Knoeppel.
610 Richmond Ave.

Kansas City, Mo.
Robert Baker,
19 E. 14th St.

Los Angeles, Calif.
E. Zinsmeyer,
1127 S. Wall St.

Memphis, Tenn.
C. B. Rutledge,
203 Monroe Ave.

Minneapolis, Minn.
Leo. H. Cooper,
422 Builders' Ex. Bldg.

New Orleans, La.
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1006 Mountain St.

lost its initial velocity long before it can reach any of the pupils.

We had no fear of overheated feet, as the concrete floor plus a wood floor over the warm joint space would be an ample heat-retarder. There was precedent as to this question of too hot floors, provided by a school built many years ago at Gary, Ind., in which a steam pipe was run between every joist and the adjoining joists.

The building was built and the plant was installed. The anticipated speed of erection was obtained. No particular protection was given to the joists. It was necessary, of course, to carefully seal off the joist-space of each class room from the joist-space of the adjoining class rooms. This was done by building all partitions through the joist space, to be sealed against the bottom of the floor slab above.

The Jones Junior High School has the equivalent of thirty class rooms, an auditorium, a gymnasium, a large cafeteria, and many smaller auxiliary rooms. It is of fire resisting construction. The cost of the building complete with mechanical equipment was $618,000. This is a unit cost of 28.77 cents per cubic foot. The heating system in the Toledo schools usually costs about ten per cent of the building contract. The cost of the Jones Junior High School heating plant was not affected especially by the comparatively slight difference due to the baseboard air inlets.

The Jones plant has served through four winters. It is reported that the operation is satisfactory and that the improved air distribution does result in a decided reduction in window chill.

A check-up of the average fuel record of this building shows that it requires no more coal per unit than its contemporary buildings of comparable size, and that it requires much less coal per cubic foot of space heated than split systems, while giving superior comfort.

The best evidence of the success of the plant is that two large Junior High Schools in Columbus using similar slot-introduction air supply have been equally satisfactory, and that baseboard air delivery has been incorporated in two Toledo elementary schools now in course of construction.

The Readers Have a Word to Say

(*Continued from page 70*)

the way of catching clothing. Rather, it remains in a retracted position entirely smooth with the face of the lock on the edge of the door.

I first began to work on this type of lock on account of my desire to paint over the strike plate and the face of the lock with the same paint as that used on the door and door frame, but due to the sliding action of all locks that I have heard about the paint becomes scraped and marred by the necessity of the latch having to slide on the strike plate. This action you have probably observed also mars the finish of the latch and strike plate even when they are not painted.

In addition to the above improvements I have changed the knob action from rotary to push and pull by use of a new type of mechanical action and yet retain the possibility of using any of the present appearances where either a rosette or an escutcheon is used. The push and pull operation is in the natural direction, that

Chicago is ILLINOIS minded

Flying over Chicago's famous loop district, the airman's camera registers a view that includes eight of Chicago's newest and most magnificent structures; monuments to Chicago's progress—and, to the standing of ILLINOIS Heating Systems—for they are all ILLINOIS equipped.

Selected from among ILLINOIS installations within one year, in Chicago alone, these buildings typify the widely varying conditions, and exacting operative requirements that are being met, to the entire satisfaction of architects, engineers, contractors, owners.

When millions of dollars are invested in projects such as these, it is done carefully; wisely. ILLINOIS, is specified for the heating, for client satisfaction must be assured.

Write for Bulletin 22

ILLINOIS ENGINEERING COMPANY

ROBT. L. GIFFORD. PRES. INCORPORATED 1900

BRANCHES AND REPRESENTATIVES IN 40 CITIES

CHICAGO

1. Merchandise Mart
   "The World's Largest Building"
   Marshall Field & Co., Owners
   Graham, Anderson, Probst & White, Architects
   Robert Gordon, Inc., Heating Contractors
2. The Chicago Daily News Building
   Holabird & Root, Architects
   J. A. Sutherland, Engineer
   Robert Gordon, Inc., Heating Contractors
3. Steuben Club
   K. M. Vitzthum & Co., Inc., Architects
   E. B. Kaiser, Heating Contractors
   E. S. Volk, Engineer
4. The Foreman National Bank Building
   Graham, Anderson, Probst & White, Architects
   Phillips Getschow Co., Heating Contractors
5. *One La Salle Street
   K. M. Vitzthum & Co., Inc., Architects
   John D. Small, Engineer
   Mehring & Hanson Co., Heating Contractors
6. Willoughby Tower
   S. N. Crowen & Associates, Inc., Architects
   Kohlbry-Howlett Co., Heating Contractors
   A. W. Nelson, Engineer
7. Board of Trade
   Holabird & Root, Architects
   J. A. Sutherland, Engineer
   Mehring & Hanson Co., Heating Contractors
8. *Buckingham Building
   Holabird & Root, Architects
   J. A. Sutherland, Engineer
   Kohlbry-Howlett Co., Heating Contractors

*Illinois Zone Control Systems.

Photo by Chicago Aerial Survey

Designed to please, endure—and to sell!

THE VOGUE for fabric wall coverings goes back for hundreds of years. But not until such fabrics as Wall-Tex were manufactured could this vogue be extended to people in all stations of life.

Now quantity production enables you to recommend Wall-Tex to your clients regardless of their financial standing. Wall-Tex is reasonably priced and specially made to give lasting service for at least ten years. The base of Wall-Tex is a sturdy fabric. It is treated with quality oils and colors.

Plaster cracks are hidden and new ones prevented from occurring when Wall-Tex is used. A wide variety of patterns enables a satisfactory choice for every room in every type of interior. If desired, rough plaster or paint finished may be used to redecorate Wall-Tex.

Architects, builders and decorators should obtain the informative booklet, "The Modern Trend in Wall Coverings," and name of nearest dealer by writing to this address:

COLUMBUS COATED FABRICS CORPORATION, Dept. C-7-30
COLUMBUS, OHIO

Formerly The Columbus-Union Oil Cloth Company

is, the door is pulled open or pushed open depending upon which side of the door you are, by simply pulling on or pushing the knob.

In addition to the above this type of lock will not require as large a pocket in the door and may be manufactured and applied as cheaply as the present type of locks when put out in quantity production, yet preserve the necessary qualities of durability and adjustment for ill-fit, settlement and shrinkage.

I have taken the precaution of securing patent protection and my attorney has not found any patent conflict except that the idea of push pull action on locks was patented in its mechanical operation nearly fifty years ago and described in half a dozen different patents which have apparently not been marketed.

If you should have information from any manufacturer interested in this type of lock, I would be interested in arranging for a more extensive manufacture than is at present contemplated.

I hope your paragraph will bring forth from architects and others some comment as to whether a change in lock operation will be welcomed. The ready acceptance of the Toggle switch prompted me to consider the improvement in the knob and latch operation of the lock.

I hope this letter expresses my appreciation to you for introducing the subject to the architects of the country.—*M. E. Boyer, Jr., A. I. A., Charlotte, N. C.*

Every Age Creates Its Own Architecture

(*Continued from page* 30)

will usually appear when the material conditions for their materialization are already on hand, but never—the other way around. That accounts for the failure of the modernistic architects of the early years of our century, who tried to create a new architecture not on the strength of new factors in life and technique but merely as a protest against the colorless and drab conservatism which dominated architecture in the course of the preceding half century. The specimens of that early modernism, which was launched before the material conditions could bear it out are clearly expressive of artificial and elaborate design and that is why they have already lost the artistic attractiveness which was ascribed to them at the time of their creation.

It stands to reason that the contemporary level of technique, the industrial character of our era the democratic tendencies of social organization and the enormous volumes of building provide ample material for the creation of new architectural forms and a productive field for the creative ideas of the architect. It is quite plausible to expect from architecture the growth and progress seen in technique and industry, which have outdone architecture by the tempo of their development.

Contemporary modernism must find its expression not in the accidental decoration of the constructive skeleton or in the clever invention of detached forms and details, but by following the path of soundness in composition and construction. As long as our modernism does not produce forms as distinct and logical as those of the Greek temple it will be difficult to see in it a new style. Thus far it has been a creative experiment stimulated by social conditions and an exceptional growth of technique and machinery.

Soft light . . no GLARE

Victoria Venetians insure cool, light, well ventilated offices even under the most brilliant sun.

GOOD light helps to get work done speedily, accurately. But *direct* sunlight results in glare, injurious to the eyes, destructive to efficiency.

The attempt to solve this problem with other methods has not been successful for they *shut out* light and darken the interior.

Victoria Venetian Blinds, on the other hand, sift the glare from sunlight by *diffusing* it and flood working quarters with soft, mellow, golden light. They are made by The Bostwick-Goodell Co. of Norwalk, Ohio.

"ALWAYS READY TO SERVE."

VICTORIA VENETIANS

The Better Blinds

Ventilation . . *no* DRAFTS

AIR, too, through an open window should be broken up, diffused like sunlight, in the interests of the worker and his work.

The slats of Victoria Venetian Blinds do this. They eliminate drafts.

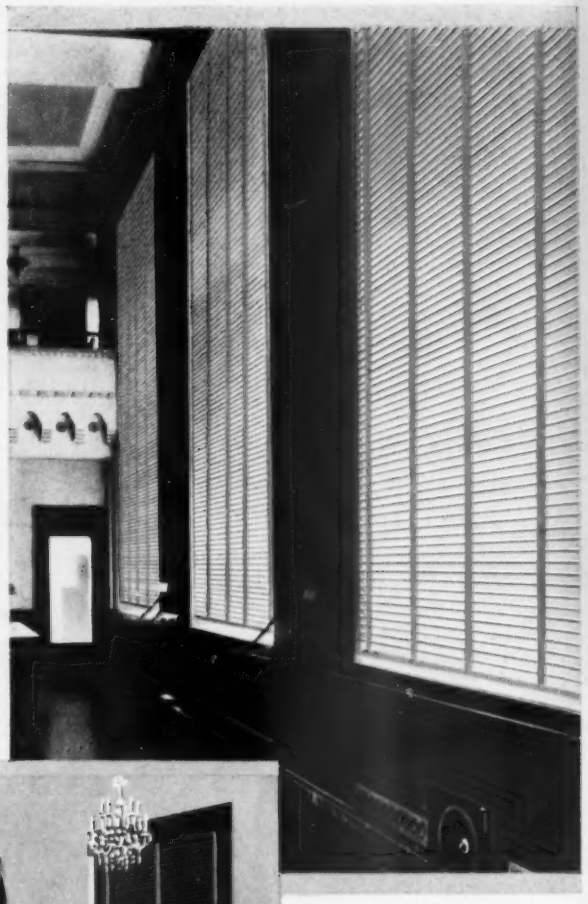
Important advantages these—yet Victoria Venetians cost no more than shades and awnings. They are good for the life of the building. Once put up they need never be taken down—they continually save money.

In sixteen different styles and any shade of color desired, Victoria Venetian Blinds harmonize with the finest interiors. The craftsmanship of 36 years in making blinds goes into this product. It is fully guaranteed.

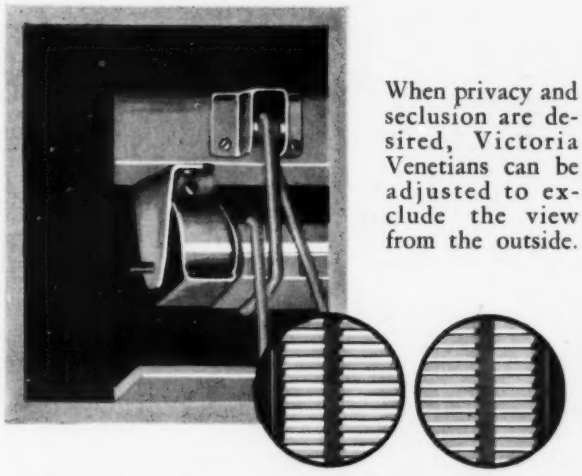
Thousands of installations nation-wide prove the beauty, efficiency and economy of these better blinds.

You can have literature on better daylight control. Write The Bostwick-Goodell Co. of Norwalk, Ohio. Representatives in principal cities.

Blinds since 1894.

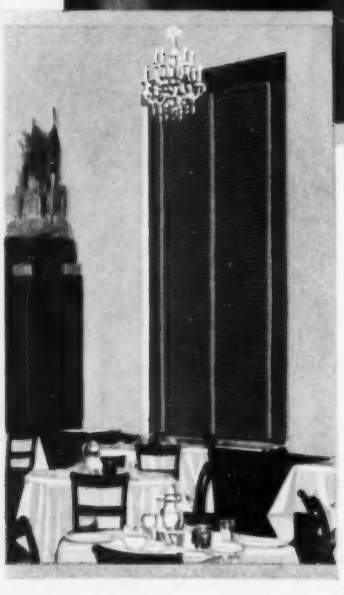


Banks, accustomed to efficiency, are quick to appreciate the advantages of Victoria Venetians.



When privacy and seclusion are desired, Victoria Venetians can be adjusted to exclude the view from the outside.

A slight pull on a cord adjusts the slats instantly to *any desired angle*. A simple mechanical device on the top tilting bars, operating like a brake drum on an automobile, provides this desirable feature. It is exclusive with Victoria Venetian Blinds.



In hotels, apartments and even the finer homes the merits of venetian blinds are becoming more and more evident.

"ALWAYS READY TO SERVE"

VICTORIA VENETIANS

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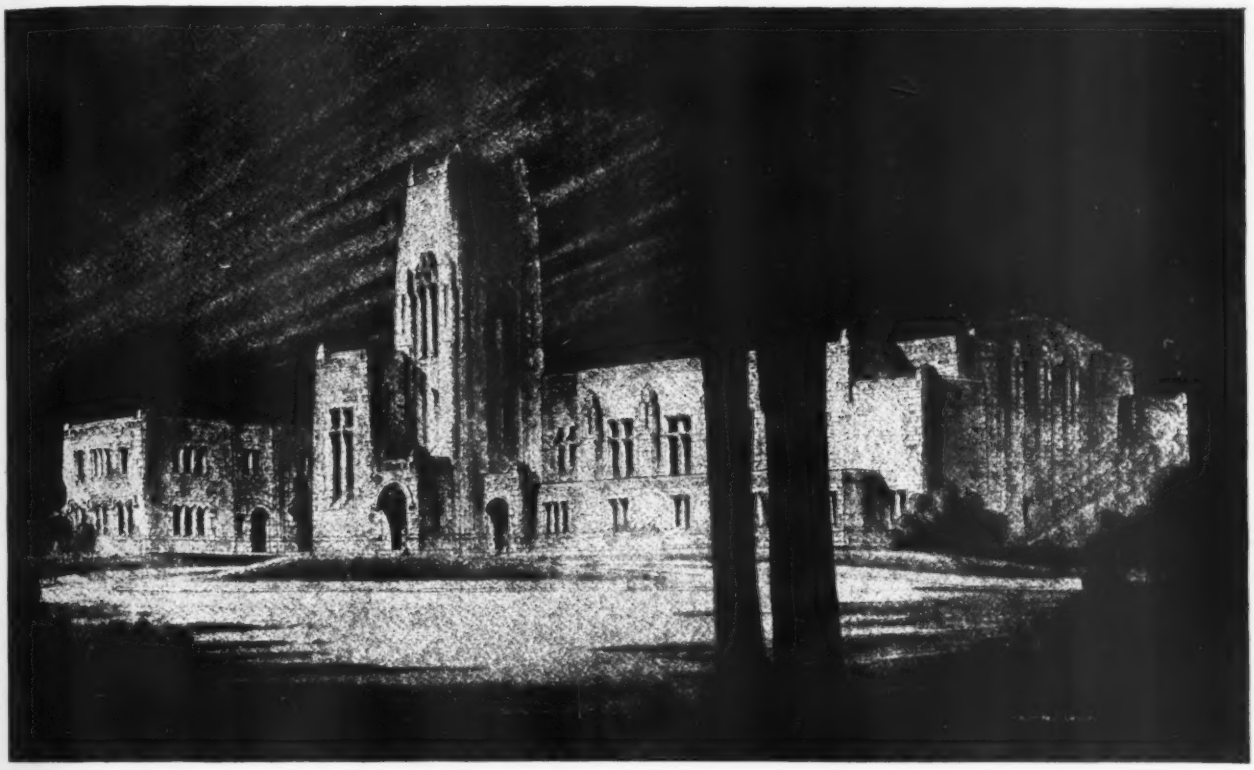

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TOLEDO
TORONTO

What Architects are Talking About

(*Continued from page 63*)

"IT is amazing to note that we spend for cigarettes and tobacco almost half as much as we spend for new homes each year," states W. Burke Harmon, a New York real estate man. "For passenger automobiles and their maintenance we actually spend more than for home building. . . . Statistics such as these indicate very definitely that even our maximum building expenditures during recent years of exceptional economic activity are comparatively small. There can be no doubt that the average family today is spending entirely too little on its home environment, as compared with its expenditure for more transitory and less important luxuries.

"Consumption of the luxuries, such as tobacco and cosmetics, has been enormously increased by mass salesmanship. Probably something of the same sort is needed to increase the desire of people for better and finer housing accommodations."

GROWING NEED among architects for information on matters of business, building operation financing, contracts, building superintendence, costs, estimating, etc., have lead to the establishment of new courses to be offered by the University Extension at Columbia University. One of these courses will deal with the architect's relation to the promotion of income producing buildings. Procedure in dealing with the realtor-promoter, banker, builder and owner; basic financial structure of the modern building operation and problems of financing and promotion of apartments, club and commercial hotels, office buildings, lofts and industrial buildings, theatres and warehouses will be taken up. Charles H. Lench, consulting architect for the Alliance Realty Company, will be the lecturer.

BUILDING COSTS may be cut as a result of experiments now being conducted by the New York Central Railroad Company at Alsen, N. Y., freight experts are studying to save one or more handlings of basic building material in transit from the manufacturing source to the building site. "Anything that will save even one handling in the shipping of heavy or bulky basic building materials or aggregates during the present effort to cut down the cost of building construction seems to have a particular appeal to the building trade," said G. H. Ingalls, Jr., representing the Container Car Traffic Department of the New York Central Railroad, in explanning the road's policy of encouraging container car research.

"THE building of homes has been steadily increasing in cost, while almost all other products of modern industry have been just as steadily declining," states Frederick P. Keppel, president of the Carnegie Corporation in his recent annual report. Comparing this to automobile manufacture, "the only reason for this absurd situation is that one industry has profited by first-rate scientific and engineering thought, and the other has not. It certainly cannot be laid to the rising cost of material and labor, since this has affected both industries alike. Here again a foundation devoted to the

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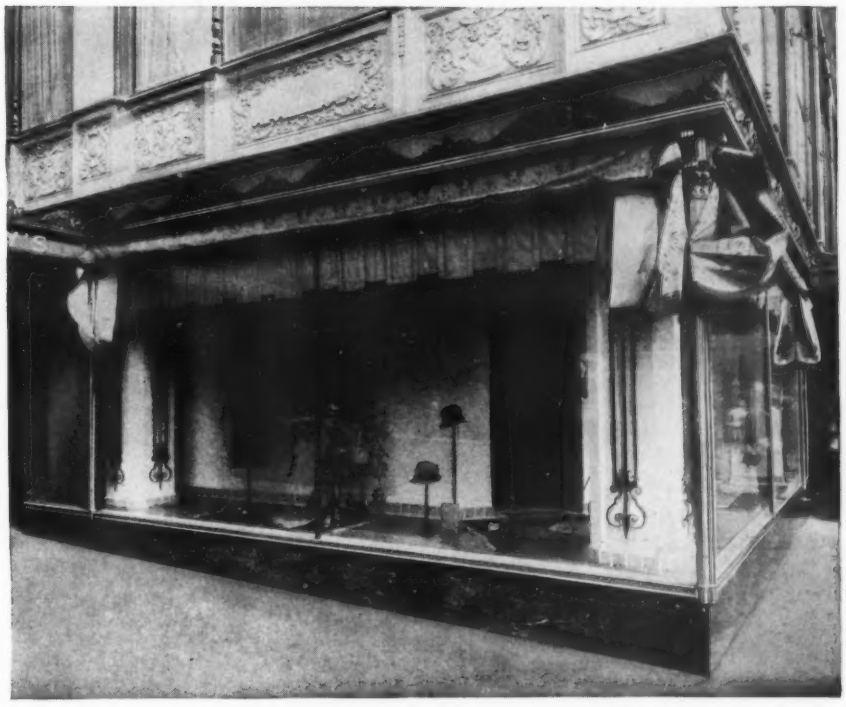

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study of housing problems and equipped to experiment in different types of design and construction would have the chance to make a contribution of inestimable significance toward the improvement of present conditiions."

"THE SNIPING of the architect into the contractor's work; the sniping of the contractor into the architect's profession; the sniping between the architect and engineer—all must stop if we are to go ahead," said Merritt Harrison of Harrison & Turnock, architects, at the recent annual meeting of the Indianapolis Building Congress. "Each part of the building industry is necessary, and necessary only in its particular sphere. The sub-contractor or material men should not be relieving the architect of his rightful services to the owner by furnishing structural and mechanical services which should be furnished by the engineering profession and paid for by the architect."

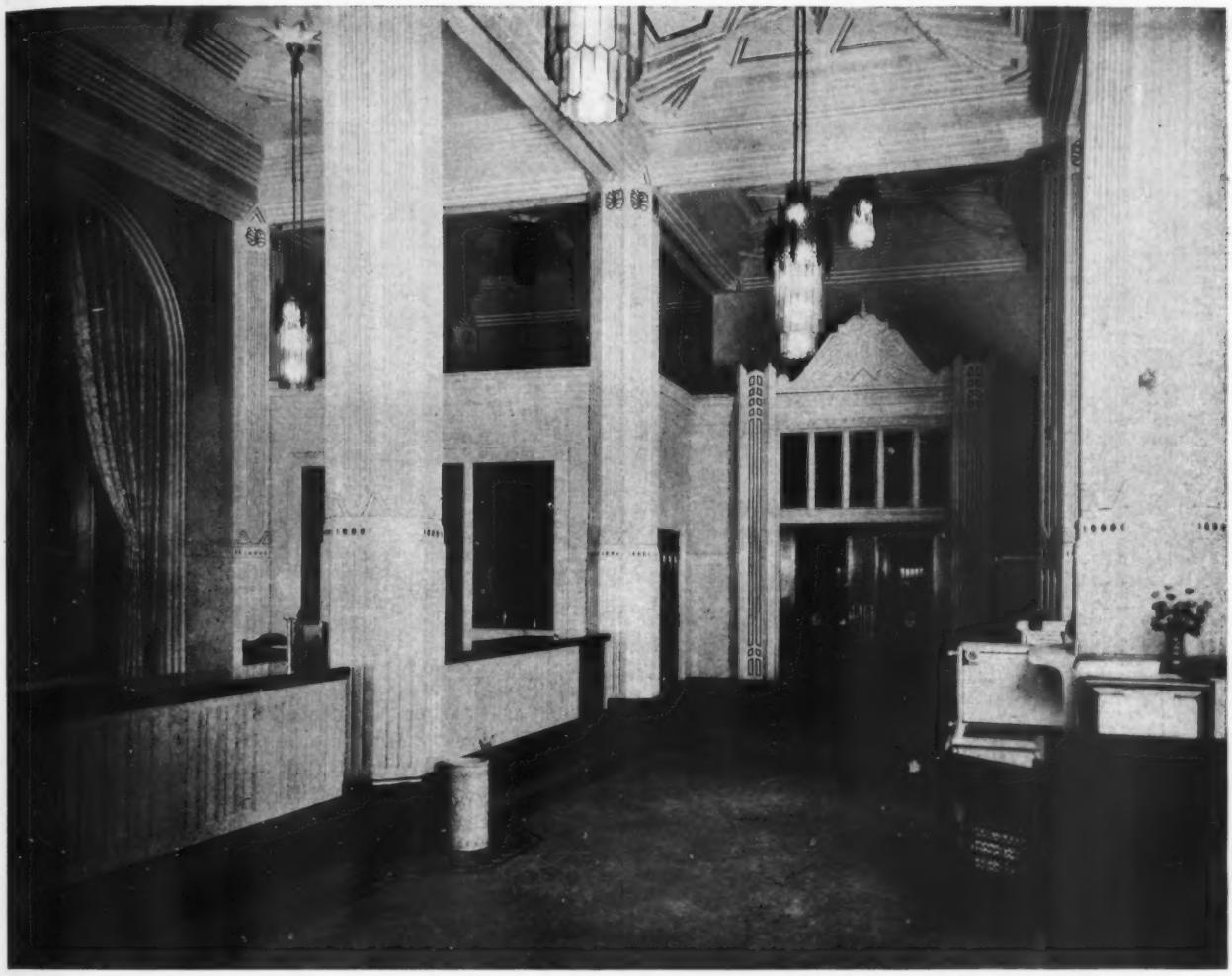
AWARDS have been made by the First Avenue Association, New York, for the finest buildings erected during 1929 in the territory from Twenty-third Street to Ninety-sixth Street, and from Second Avenue to the East River. These awards, consisting of a certificate presented to the architect and owner of each building, were for the apartment hotel at 322 East 57th Street, Caughey & Evans, architects; the apartment building at 434 East 52nd Street, Emery Roth, architect; and St. Stephen, King of Hungary, R. C. Church and school building, 406 East 82nd Street, Emil J. Szendy, architect.

THE Minnesota Chapter of the A. I. A. has elected officers as follows: Wilbur H. Tusler, president; Louis B. Bersback, first vice-president; F. G. German, second vice-president; Guy N. Crawford, secretary; Clyde W. Smith, treasurer; and William G. Dorr and Rollin C. Chapin, members of the executive committee. Each year the chapter awards prizes to the two students in the school of architecture, University of Minnesota, who received the highest averages for work during their junior year. Bruce Wallace was awarded the first prize of $50 and Gerhard Peterson the second prize of $25.

WORK of Frank Lloyd Wright was made the subject of an exhibition of the Architectural League of New York, May 29 to June 12. This was the first exhibition of Mr. Wright's work in New York City, for although he is well recognized abroad as having started a new architectural school, yet his recognition in this country has been tardy.

THE Seattle Real Estate Board has resolved to award certificates of honor at the end of 1930 to the owners of the best buildings completed in Seattle in 1930: business building in the downtown area, business building in a business subcenter, industrial building, single detached residence, apartment house, single detached residence costing more than $7,000.

A GREATER appreciation of architectural beauty and a greater spirit of cooperation between architects and illuminating engineers is forecast by the recent inauguration of short architectural courses for illuminating engi-



The Modernistic Movement—Plate 1

THIS interior of the Oklahoma Natural Gas Building at Tulsa, Okla., represents the modern trend in architecture. It was designed by A. M. Atkinson of Tulsa. The marble is Rose Tavernelle, with Belgian Black base and deal plates. It was finished in our Dallas shops and installed by their workmen.

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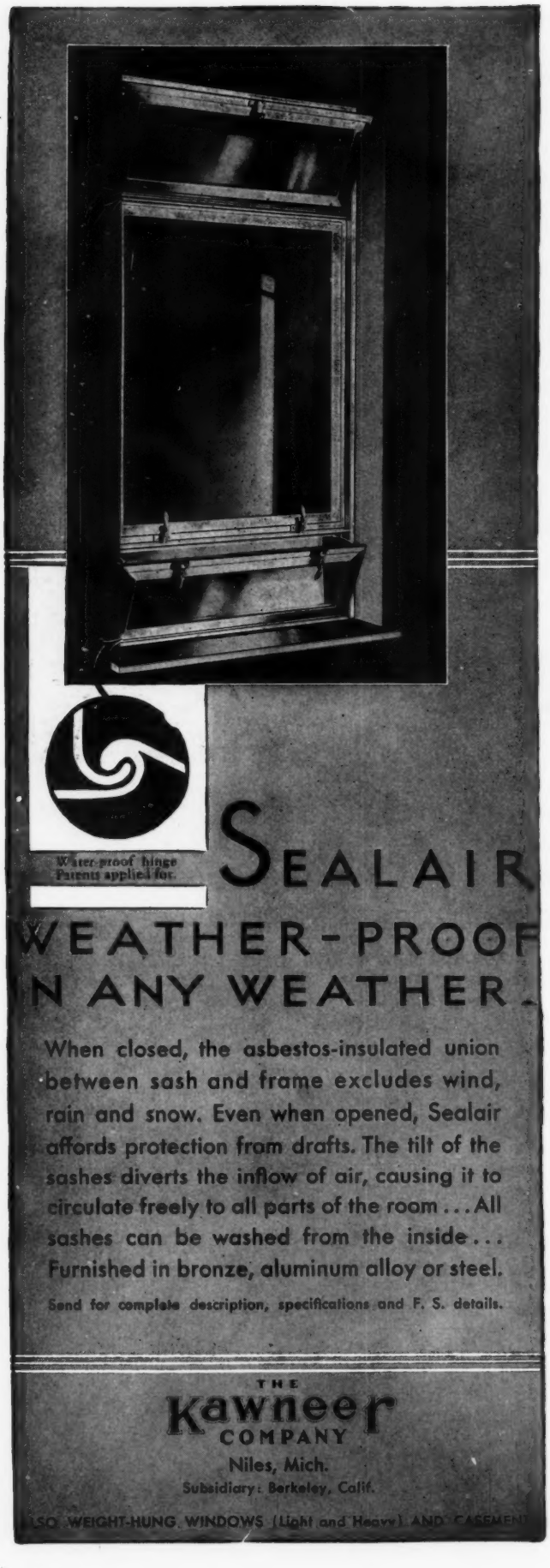
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neers, inspired by the Illuminating Engineering Society. One course will be held in New York under the auspices of Columbia University, and another in Chicago under the auspices of the Schools of Architecture of the University of Illinois and Armour Institute. Both courses will consist of two lectures each day for five days and will cover the fundamentals of architecture and allied subjects.

OFFICERS of the Producers Council were recently elected as follows: F. P. Byington, president; J. S. Coulton, first vice-president; S. L. Barnes, second vice-president; J. C. Bebb, secretary; and Scott Button, treasurer. This slate was a reflection of last year's officers.

"THE small suburban lot is the bane on full enjoyment of natural advantages," states Arthur C. Holden, architect. "It so cramps the plan and arrangement of house and grounds that the beauty of the out of doors is either spoiled or lost. To combat this difficulty, where means of the owner are small, there should be more grouping of houses so as to concentrate open spaces and make them more useful and enjoyable."

OFFICERS of the Brooklyn, New York, Chapter of the American Institute of Architects were elected recently as follows: Charles C. Wagner, president; William A. Sanders, vice president; George Francis Kiess, secretary; and Herbert C. Bowman, treasurer.

• COMPETITION NEWS •

The third common brick house competition held by the Common Brick Manufacturers Association will close November 18, 1930. Photographs and blue print plans are necessary, the houses to have the exterior surface of their walls built of at least seventy-five per cent of common brick. The first prize will be $500, the second $300, the third $200 and the fourth $100. There will be six honorable mentions of $50 each.

The third church building competition conducted by the Christian Herald, New York, will close September 30, 1930. Only churches built within the past five years are eligible. Ten cash prizes will be awarded on the basis of photographs and floor plans submitted.

Entries will be judged by a Jury of Awards headed by Francis Laurie S. Mayers, A. I. A., of Mayers, Murray and Philip, New York, and including in its membership Mr. Louis La Beaume, F.A.I.A., of La Beaume and Klein, St. Louis; Mr. H. J. Maxwell Grylls, F.A.I.A., of Smith, Hinchman & Grylls, Detroit; Dr. Paul H. Vieth, Ph.D., Research Secretary of the International Council of Religious Education; and Rev. Louis C. Wright, D.D., of Cleveland.

A bathroom installed in the private offices of Irwin S. Chanin on the fifty-second floor of the Chanin Building, New York, was judged the finest out of over 1,200 entries in the annual competition held by the American Encaustic Tiling Company.

Winners of the Fifth Annual Architectural Competition, conducted by the Brooklyn, New York, Chapter of the A.I.A. for its student affiliation, were Paul McDade, first prize of $75; Charles L. Macchi, second

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prize of $50; H. P. Conway, third prize of $25, and Robert E. Hillier, first mention.

The competition for a street litter basket being conducted by the New York Academy of Medicine has been extended to October 1st, 1930. There is a first prize of $500 and a second prize of $250. Full information may be had from the secretary, 2 East 103rd Street, New York City.

The Committee on Accident Prevention of the Building Trades Employers' Association of the City of New York has announced a prize competition for designs of a certificate of merit to be awarded the winners of the safety contest. The first prize will be $100, the second prize $50 and there will be three honoroble mentions. The competition is open to all draftsmen, artists and designers and will close July 31st. The text of the certificate and other information may be obtained from William G. Wheeler at the offices of the Association, 2 Park Avenue.

• PERSONALS •

Charles Hodgdon and Son, architects, have moved to 111 West Monroe Street, Chicago.

The architectural partnership of Broackway and Stone has been dissolved and William J. Stone announces the opening of new offices at 247 Security Building, Pasadena, Cal. Mr. Stone will specialize in clubs, school houses and residences.

Frederick J. Schoettley, architect, has moved his offices to 18055 Schoenherr, Detroit, Mich.

Flynn E. Hudson, II., is continuing the architectural practice of the late Charles E. Choate at 222 First National Bank Building, Montgomery, Ala.

Joseph G. Ludgin, architect, has moved his offices to the London Guarantee Building, Chicago.

Henry R. Diamond has moved his studio to 50 West 46th Street, New York City, where he will continue to specialize in the rendering of architectural subjects.

Arthur Woltersdorf, architect, has moved his offices to 520 North Michigan Avenue, Chicago.

Lutah Maria Riggs, architect, and William Allen Horning, associate, have formed a partnership to complete the work of the late George Washington Smith, at 17 Meas Road, Montecito, Cal.

Dorr & Dorr, architects, have moved their offices to 702 Wesley Temple Building, Minneapolis, Minn.

E. M. Keppel, A.I.A., has been made an associate architect with the Owsley Company, Youngstown, Ohio.

Emilio Levy, architect, has moved his offices to 551 Fifth Avenue, New York City.

Rollin C. Chapin, architect, has moved his offices to 702 Wesley Temple Building, Minneapolis, Minn.

H. L. Fetherstonhaugh, A.R.I.B.A., has moved to the University Tower, University Street, Montreal, Canada.

The firm of Hendryx and Benton, architects and engineers, has been dissolved. The business will be carried on by Thomas K. Hendryx, architect, in the Tide Water Building, Bradford, Pa.

P. A. Bartholomew, architect, and W. H. Kirchenbower, associate, have moved their offices to 2206 Clark Building, Pittsburgh, Pa. (*Continued on page* 118)

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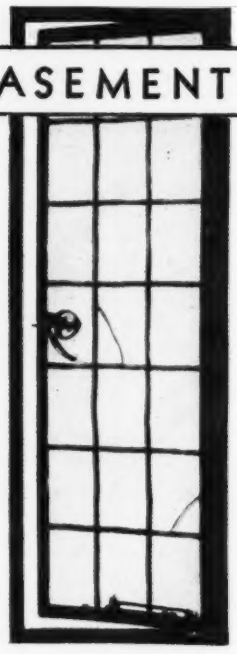

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Factors in Stair Safety

(*Continued from page 66*)

for tread purposes on account of the fact that they constitute a positive slipping hazard. There are other materials, including some slates, marble, some wood, and steel troweled concrete, that possess such low frictional resistance as to be a menace for stair tread surfaces.

Numerous materials, such as the softer woods and marbles, alberene, bluestone, some slates, etc., with a higher frictional coefficient have proved safe under normal conditions of service; but some, even of these, quickly become unsafe by wear, mud, oil, or some other not unusual circumstance that temporarily, and sometimes permanently, renders them hazardous.

"The safe type of tread," says the National Council, "retains an effective anti-slip quality for long periods, even under exceptionally severe traffic. To this class belong cork, asphalt mastics, iron-abrasive and lead-abrasive types of anti-slip treads." Service tests have abundantly substantiated both this definition of a safe tread and the ability of the materials mentioned to meet the qualifications. Incidentally, it should be noted that iron, bronze, and a specially developed aluminum alloy, all with abrasive embodied in the wearing surface at the time of casting, are being used extensively for a great variety of tread surfaces including stair treads.

Wooden treads call for regular inspection and careful repair. A good variety of abrasive-metal plates applied over them protect against wear when new, or, if badly worn, are a desirable means of repair.

CONCRETE treads are frequently finished with a steel trowel. This should never be permitted. If the traffic is very light, the finish should be with a wood float, so as to obtain a roughened surface. If the traffic is heavy, abrasive grain may be floated into the cement to provide a higher frictional resistance. However, the reinforced concrete stair tread is so difficult of renewal when worn and must remain in service for such long periods that it is much better to design and construct it at the start with the abrasive-metal plate extending from the nosing backward not less than five-eighths the distance to the riser. These plates should extend to within three to six inches of the stringers, depending upon the distance hand rails are from side walls. The purpose of these inserts is not only to prevent people from slipping but to protect the nosing edge from chipping and to take all of the wear on the easily replaceable insert so that ultimate maintenance costs may be as little as possible.

Precast terrazzo treads have become very popular, and justly so. The old-fashioned terrazzo of cement and marble aggregates, ground and polished to a smooth finish, is extremely hazardous, and fortunately has become almost obsolete. The modern method is to substitute for fifteen to twenty-five percent of the marble aggregate an abrasive specially made for the purpose by several manufacturers. The method of utilizing the abrasive in the terrazzo in this fashion may be employed by any terrazzo contractor.

The cement filled steel pan form of construction, with a moulded steel riser so designed that it is carried forward and up to form the nosing overhang, the upper edge of which is the contact point for the foot of a

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See page C-2928 Sweet's Catalog and Page No. 147 American Architect Specification Manual

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person descending the stair has become very popular. No more treacherous hazard exists on a stair than the smooth, slippery, metal nosing edge involved in this type of construction. This principle of stair construction should be used only if provision is made to avoid the slippery metal contact point at the nosing edge.

In rare cases a ceramic tile of the smooth or even glazed type has been used for stair treads. Such tiles usually are extremely hazardous as tread surfaces. An anti-slip ceramic tile with an abrasive grain content has been developed and is obtainable from several manufacturers. The difficulty of satisfactory renewal has somewhat handicapped this type of construction but with the abrasive tile the safety factor is satisfactory.

A method by which architects could be enabled to identify with certainty the safe quality or otherwise of a given material they propose to use has been evolved in connection with an extensive research carried out by the U. S. Bureau of Standards. A standard method for measuring frictional resistance has been devised. A certification of the measured factor of any product may be obtained by any manufacturer from any commercial laboratory, and the architect is fully justified, under existing conditions, in demanding such information from the manufacturer, American Standards Association in New York City, or the U. S. Bureau of Standards at Washington. Only by the adoption of such procedure, enabling them to specify with certainty safe materials for stair treads and the utilization of standards that have been found effective, will architects, builders, and owners be able to discharge their responsibility to the public.

Kansas City Home Show

(*Continued from page* 45)

and substantially erected with doors, windows and ceilings. Exterior walls were finished with wide clapboards.

The decorative theme of each room was based somewhat upon an historical New England room of architectural merit. The woodwork, hardware, decorating and furnishings were correct in period and precedent. The furnishings in most part were antiques of exceptional quality or well-executed reproductions. This exhibit demonstrated to the public that livableness and attractiveness need not necessarily be expensive and yet be in good taste. The correct relationship of decorative principles rather than unrelated things were demonstrated in a manner that the average visitor understood.

Many of the exhibit booths of material and appliance manufacturers were designed by architects, offering perhaps a new outlet for service, and it was an interesting fact that these particular exhibits were the most productive of business.

Summing up the result of the experience of this exhibition from the standpoint of publicity: approximately 100,000 admissions were received, scores of columns of newspaper publicity were printed, many pages of local publications were devoted to it, and hours of luncheon programs were expended in the discussion of it. From the standpoint of the participating architects, such projects are decidedly worth the time and effort expended. The achievement of such things, well done, has both an immediate monetary gain and a lasting effect that advances the profession.

The lawyers had a lot of questions to ask

So He Took the $5,000

(*Continued from page 39*)

stairway and thus sacrificing a much needed linen closet.

By the end of the summer Mr. Small had used up four of the five thousand dollars at his disposal. He had not much to show for the expenditure except a lot of guillotine windows, a cobblestone fireplace and many unfinished partitions, but he assured his client that everything was all right. There was some talk of labor troubles, so he decided to lay off as soon as Mrs. Strong packed up and went back to the city.

However, he started to work long before she returned in the spring, and she was impressed by the progress and his enthusiasm. Then he sprung his big surprise. He had been all over the job, refigured it, that is, and found that he needed five thousand dollars more, instead of one thousand, to complete the work.

The whole of the second season was spent in energetic but profitless conferences. So many people seemed to be interested in the old barn! Mrs. Strong had her first taste of mechanics' liens. The lumber company attached the property on account of unpaid bills for material. The bank had something to say about Mrs. Strong's money going to pay workmen for days spent, by some oversight, on another one of Mr. Small's jobs. The lawyers had a lot of questions to ask not only Mr. Small, but the indignant Mrs. Strong herself. Small stuck to his guns and refused to budge without more money.

By the beginning of the third season the president of the bank had pulled enough wires to have a new contractor on the job, and the sound of hammer and saw was soon heard in the barn again. The completion of the work, with modifications was to cost not a penny over three thousand dollars. Mr. Small was persuaded to return or replace some of the building materials he had stolen. A few months later the remodelling was pronounced complete.

Picture for yourself what the interior looked like. If you can't, here is a fair description. Guillotine type windows spaced at regular five foot intervals all around two sides and the front end of the studio. The walls are plastered. Between the windows, four feet from the floor, are isolated lengths of hand-hewn beams swimming without visible support, in a sea of plaster. They project from the plaster surface an inch and a half, but as they are chamfered they cannot be used even for narrow shelves. Similar detached sections of beams, some vertical, some diagonal, are also swimming around

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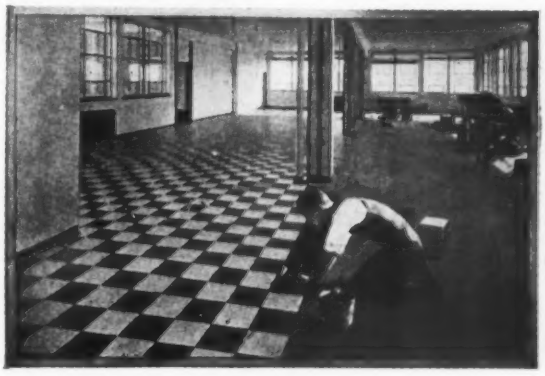

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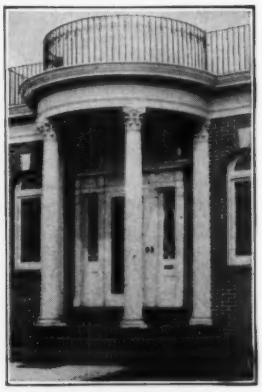

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in the plastered sea. An aggressive fireplace dominates the inner end of the room, all about are trim corners, straight lines, new wood. Everything is what certain vulgar people call "snappy." The floors are level, and the door openings vertical. The only touch of the nobility inherent in the old structure is supplied by the disjointed sections of its skeleton sticking through where the considerate builder hadn't found it necessary to remove them. The stairway is a fire-trap. From the exterior the ensemble has as much architectural interest as a child's Noah's Ark.

Mrs. Strong hasn't yet figured out how her venture stands financially. She paid almost five thousand dollars to Small, three thousand to the second contractor, several hundred to the lawyers, and she lost interest on her money for three years. But the most puzzling part of the whole business is that artistic people don't seem to appreciate the charm of a remodelled barn, for she has been unable to rent it. (Yes, there is at least one architect in the district).

Dry Rot? No, Termites

(*Continued from page 37*)

and by swarming. Tunnels have been followed for two or three hundred feet. The writer has found that they may spread from one nest to a half dozen houses, and from a bit of native wood in Cleveland they have reached a score or more houses within a radius of three or four hundred feet. From each house infested they can reach others. As they uniformly hide from sight they may be near or in a residence quite unknown to the owner or occupant. The first evidence of their presence is apt to be the breaking in of a hollowed out chamber or runway. This sometimes means that the entire body of the wood is eaten except for the very outer surface which is left, often as thin as paper, to protect them from predacious insects—black ants especially—mice and birds.

Some black ants eat into wood but their destructiveness is nothing compared to that of the termites. The white ants, which are not ants at all, when once they get entrance to a residence built of wood, find darkened runways to all parts of the structure. Often the timbers are honeycombed with passages that are constantly increased in size until no strength is left.

A friend of the writer leaned against a large supporting post in a warehouse which gave way under his weight. A mere shell of the post crumbled about him. An acquaintance gave a very large residence to be used as a Y. W. C. A. dormitory. There was no evidence of termite work visible, but when some changes in partitions were attempted it was found that no part of the structure could be used. In another case the stairs to a three story residence showed a little sagging and carpenters were set to work upon it. They expressed surprise that all the stairways had not fallen of their own weight into the basement. A man fell through the stairs of an apartment house to the stairway below. A large greenhouse with a wooden framework was demolished within five years of its construction. No part of it could be saved. Scores of examples of such damage that have come to the personal knowledge of the writer could be given. All in the United States.

While wood seems to be the preferred food of termites they will eat almost anything not of earthy material. Thomas E. Snyder, government expert, names the following as providing nourishment, or at least subject to their destroying powers: furniture, clothing, shoes, books, paper, living vegetation, mummies, coffins in graves, bones, elephant tusks, ivory, human cadavers protected (?) by formaldehyde, lead sheathing, rubber insulation, lime mortar. Washington officials found them eating records, postage stamps, money, hospital bandages, silk fiber bond paper. In Columbus, Ohio, they attacked nearly everything put away in a storage room in a building of the State University. They have been found destroying the woodwork in two school buildings in Cleveland and one in Lorain, Ohio.

If the bugs are allowed free course in their Saturnalia of destruction will it eventually mean that all buildings in this country must of necessity be constructed of stone, brick or some earthy material, as they are in Africa and India? Experts so far have succeeded only in finding partially successful methods of keeping the insects out of buildings. No one has discovered a method of eliminating the insect. Owing to the secretive habits of the termite and its community way of living it would seem as if the use of a virus or disease germ might prove to be effective.

It is not to be inferred that white ants are infesting, or likely to infest, most of the houses in this country. That is not likely to be the case for a long time, a generation or two. It is true that they are well distributed over the country, and it is also true that every house is a potential habitat for the insects that may be foraging in the vicinity. Every infested house is a center for spreading and it cannot be quarantined.

A PRACTICAL feature to be considered is that every house should be built with at least a foot of clear foundation wall between the earth and the framework so that inspection can easily be made. Lines of dirt up and down the walls inside or out should be carefully examined. If they are hollow there are termites about. Follow these tunnels to the nest if possible and then saturate the ground with lye, kerosine, live steam or some poison, under proper supervision. If they enter by means of woodwork in contact with the ground cut away enough so that a good layer of concrete will shut them out.

In building, cap the foundation wall with an inch of concrete. Between this and the sill place a strip of copper or galvanized iron so that it will extend out about two inches. This can be bent down to shed the rain. Termites will not build out and over this. Allow no wooden steps to rest on the ground either outside or in the basement. Supporting posts in the basement should rest on a broad base of concrete or be made of iron. Concrete floors sometimes crack and thus permit the entrance of the insect.

If by chance they have found their way into the building they can only be gotten rid of by finding their place and concreting it so as to shut them out. Creosoting the timbers about their passageways does little good.

Finally, if you wish to appreciate the intelligence, the community spirit and consciousness, the power to do, and the language of the termites read Materlinck's *Life of the White Ant*. Every library has it. It is a fascinating story. Through ignorance of conditions in the United States the author limits the insect to the Tropics.

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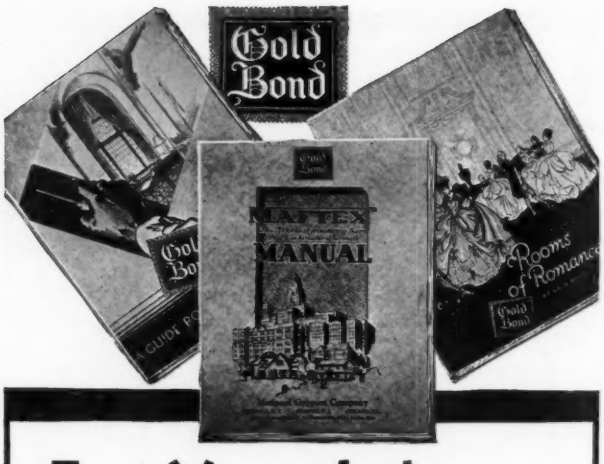

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• DEATHS •

FRANK ALVAH PARSONS, President of the New York School of Fine and Applied Arts, died May 26 at the age of 62. He was a graduate of the department of fine arts, Columbia University, and was an instructor at Columbia University from 1898 to 1905, when he founded the school of which he was president. From 1903 until 1914 he lectured at the Brooklyn Institute of Arts and Sciences on interior decoration. Every year he delivered a course of lectures at the Metropolitan Museum of Art, and went to Europe each summer to conduct study classes. He was the author of several books on advertising art, interior decoration and dress, one of which was "Interior Decoration: Its Principles and Practice."

LANSING C. HOLDEN, a retired architect of New York City, died at Carmel, N. Y., at the age of 72. He graduated from Wooster University with the degree of M. A. He was a past president of the New York Chapter of the A. I. A. and in 1916 was a member of the Board of Examiners of the City of New York, and from 1916 to 1918 a member of the Board of Standards and Appeals. He was a director of the Engineers Club.

PLINY ROGERS, architect, of New York City, died June 1st at the age of 48. He was a graduate of Cornell University and while there won the Andrew D. White prize. After twelve years as a designer he became a member of the architectural firm of Litchfield & Rogers.

PROFESSOR E. GORTON DAVIS of the Department of Landscape Architecture, Cornell University, died May 24 at the age of 50. He was a graduate of Granville College, now Denison University, and began to teach at Cornell in 1922.

WILLIAM J. LOCKE, the well known novelist, died in Paris May 15 at the age of 67. He was well known in architectural circles, having studied architecture and being secretary of the Royal Institute of British Architects from 1898 to 1908. He was also a member of the American Institute of Architects.

EDWIN H. BROWN, A. I. A., of Hewitt & Brown, Minneapolis, and president of the Architects Small House Service Bureau, died May 9.

Consult an Architect

(*Continued from page* 33)

The Westchester Society of Architects has been progressive in its effort to establish a keener appreciation for good architecture. This effort, supported by the editorial authority of leading architectural magazines, has helped to enlist the support of associated lines such as the building material dealers. It is a hand-in-hand policy that needs little argument anywhere. What the Mahlstedt Company has done in Westchester may be done in any other locality. In cases where it may be a hardship for supply organizations alone to undertake a publicity programme built around better building and architectural services, a co-operative distribution of costs may be evolved.

Those who have opposed direct, paid advertising among architects as unethical and not dignified can have little to criticize in this method, as the complimentary truths are told by authorities other than those profiting directly by the practice of architecture. Nor can it be justly said that there is a lowering of caste or an unbecoming forwardness in seeking the co-operation of the building material dealers and others of the building fraternity. Each division from the manufacturer to the builder is a spoke in the wheel that carries forward building prosperity. Just as they are all attached to the same hub so should there be a willingness to join in every worthwhile effort that tends to start the wheel rolling. It devolves upon the architects, manufacturers, supply dealers and builders to follow ethical practices in their own business and to help promote confidence in the services of those whose businesses are so closely allied.

In behalf of reputable manufacturers and building supply dealers it is the duty of architects and builders to discredit the oft repeated phrase, "You can't get the good old stuff." The public should understand that never before has there been available such a wide range of quality products within common reach. It is likewise important that the term "Jerry Builder" find its way into the discard. In every craft there are good and bad, but it is decidedly unwise to add any more coloring to the black eyes that the building trades have carried during the past few years.

FRIENDLY recognition by architects of the worthy points in the services of dealers, manufacturers and builders will bring in return a whole-hearted support toward changing public opinion to where it thinks of architectural service as a necessity rather than as a luxury.

We are reminded now and then, when business may seem to become too impetuous, of the legend about the tortoise and the hare. While it may be true that a steady, sure pace proves to be the best in the long run, even the tortoise has to come out of his shell to get anywhere!

Why should not the business of architecture become a part of the art of planning? For those who throw aside the cloak of false modesty and take up their places in the sun must come nothing but the acclaim and respect of the social and of the industrial world. To give publicity to architectural service, to state its advantages and to invite attention to individual facilities does not mean that the art is flamboyant or debased. But it does indicate that the profession is alive to the demands of the public and is setting out to do something about it.

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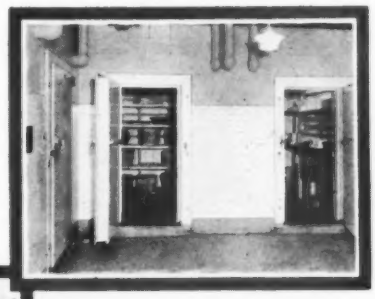

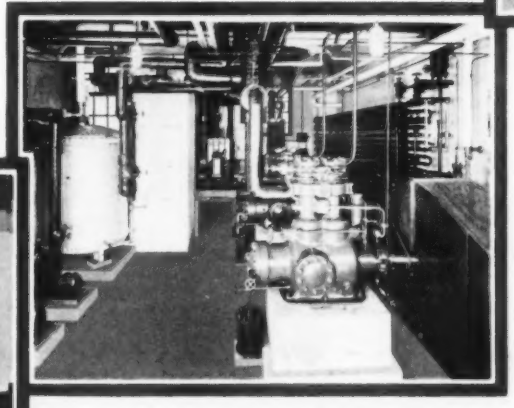

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